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A New Linguistic Relationship in North America: Algonkian and the Gulf Languages — Mary R. Haas 231

Archaeological Perspective on Algonkian-Gulf Relationships — Gordon R. Willey 265

A "Cargo" Situation in the Markham Valley, New Guinea — K. E. Read 273

Ibo Oracles and Intergroup Relations — Simon Ottenberg 295

Economic and Historical Culture of the Kalinga of Madukayan — William Henry Scott 318

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A NEW LINGUISTIC RELATIONSHIP IN NORTH AMERICA: ALGONKIAN AND THE GULF LANGUAGES

MARY R. HAAS

INTRODUCTION

THE CHIEF PURPOSE of this paper is to present evidence showing a genetic relationship between the Algonkian family of languages and the various Gulf languages, namely, the Muskogean family of languages plus Natchez, Tunica, Chitimacha, and Atakapa.[1] The postulation of a relationship between Algonkian and the Gulf languages does not necessarily mean that we must assume a greater time depth for Algonkian-Gulf than we would have to assume for the Gulf languages without Algonkian. The relationship of the various Gulf languages to one another is already quite remote and Algonkian simply forms another affiliate of the group. There may very well be additional affiliates in this series of relationships besides Algonkian which will have to be fitted in before the whole story can be told.[2]

1 A summary of this paper was presented in a symposium on "Time Perspective in American Indian Cultures" held during the winter meetings of the American Anthropological Association in 1957. The present paper was one of three devoted to the discussion of "A New Linguistic Relationship in North America." The other papers were "The Relationship from the Viewpoint of Archaeology" (see later pages of this issue) by Gordon R. Willey, and "The Relationship from the Viewpoint of Physical Anthropology" by Georg K. Neumann.

Grateful acknowledgment is made to the Committee on Research, University of California, Berkeley, for financial aid in the publication of this paper. The Committee has also kindly provided funds to employ part-time research assistants who have aided (1) in the preparation of an alphabetized file of Proto-Central Algonkian reconstructions, (2) in making other needed indexes, and (3) in the processing of some of my Natchez and Muskogean field notes. My thanks are due to Harvey Pitkin and Wick R. Miller, advanced graduate students in linguistics, who have, at different times, been of assistance in this capacity.

My thanks are also due to George V. Grekoff who prepared the map shown in Fig. 1.

2 Another likely affiliate is Tonkawa; see my paper *Some Genetic Affiliations of Algonkian* (in press). Other possible affiliations will be tested as time and availability of materials permit.

Since a genetic relationship of this nature has not been previously postulated, a number of associated questions are immediately raised. It is therefore desirable first to make a series of statements about connections previously assumed (with or without evidence) both for Algonkian and also for the Gulf languages. These statements will be made in the following order: (1) Algonkian-Ritwan, (2) Algonkian-Mosan, (3) Siouan-Gulf, and (4) Hokan-Siouan.

Algonkian-Ritwan. Wiyot and Yurok, isolated languages of northern California, were classed together under the name "Ritwan" by Dixon and Kroeber in 1913.[3] In the same year Sapir[4] postulated a genetic relationship between Ritwan and Algonkian and presented a fair amount of evidence for his hypothesis considering the scarcity of the source material that was available to him at the time. However, this possibility of a genetic relationship between Algonkian and Ritwan was immediately denied by the brilliant Algonkianist Truman Michelson, giving rise to the famous Sapir-Michelson controversy over the issue in the pages of the *American Anthropologist* in 1913-15.[5] Dixon and Kroeber supported Sapir's thesis and stated that they accepted "his findings in full confidence,"[6] but almost all other statements on the issue since that time have been noncommittal or evasive.[7]

In view of the abovementioned facts, then, it is not surprising that the Algonkian-Ritwan connection is still quite generally believed to be highly controversial, at least among nonlinguists. Greenberg's recent statement that the relationship is "evident on inspection"[8] has not helped any more than Dixon and Kroeber's acceptance "in full confidence" of 1919. What is lacking, of course, is convincing published evidence.

With this in mind (and after considerable progress had been made in connection with the Algonkian-Gulf hypothesis), attention was turned to the comparison of Algonkian and Ritwan. As a result of this study, it is possible to state unequivocally that Algonkian and Ritwan are genetically related. The evidence for this assertion is presented in a separate paper entitled *Algonkian-Ritwan: the End of a Controversy.*[9]

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3 Dixon and Kroeber, 1913.

4 Sapir, 1913.

5 Michelson, 1914, 1915; Sapir, 1913, 1915a, 1915b.

6 Dixon and Kroeber, 1919, p. 113.

7 "Sapir . . . set forth the hypothesis that these two [Ritwan and Algonquian] were related. This view was attacked by Michelson" (Hoijer, 1946, p. 13).

"Two languages of California, Wiyot and Yurok, have been suspected of kinship with Algonquian" (Bloomfield, 1946, p. 85).

"A puzzling case is the relation of Dixon and Kroeber's Ritwan (Wiyot and Yurok) to Algonquian" (Uhlenbeck, 1948, p. 223).

8 Greenberg, 1953, p. 283.

9 Haas, 1958a.

The Algonkian-Ritwan connection is thus subsumed as part of the Algonkian-Gulf affiliation, and Wiyot and Yurok cognates are added whenever possible to the list of comparisons set forth in the present paper.

Algonkian-Mosan. In his famous encyclopaedia article on "Central and North American Indian Languages,"[10] Sapir placed Algonkian-Ritwan, Kutenai, and Mosan together as one of his six proposed superstocks. Mosan itself is actually a superstock comprised of Chemakuan, Wakashan, and Salishan. Of these, Chemakuan and Wakashan are families, but Salishan appears to be of the magnitude of a stock. Not only has no evidence ever been presented for the series of affiliations subsumed under Sapir's Algonkian-Mosan, it was not until quite recently that any evidence was presented for the validity of the connections subsumed under Mosan. Recent work by Swadesh,[11] however, appears to be sufficient to establish the affinity of the three branches of Mosan. Nevertheless, he considers the relationship to be a remote one. If this is so, then it appears that it might be profitable to attempt to test the Algonkian-Mosan hypothesis by comparing Algonkian with the separate branches of Mosan rather than to Proto-Mosan. A preliminary experiment in comparing Algonkian with Chemakuan[12] indicates that this may turn out to be a productive method of procedure. Further testing with Wakashan and with Salishan remains to be done.

For the purposes of the present paper, however, leads such as those uncovered in the preliminary comparison of Algonkian and Chemakuan, are laid aside, and any possibility of an Algonkian-Mosan relationship is ignored but without prejudice.[13]

Siouan-Gulf. We now turn briefly to Siouan-Gulf, that is, to the possibility of a relationship between the Siouan family of languages and the various Gulf languages. The greatest single handicap until fairly recently has been the lack of material on Proto-Siouan. Wolff has made a preliminary statement about the sound correspondences within Siouan[14] which has proved very helpful, but we still lack even the beginnings of a comparative dictionary. It is my belief that the Siouan languages are at least distantly related to the Gulf languages but I am not

10 Sapir, 1929. However, to the best of my knowledge the first published statement concerning this particular series of affiliations appears in Radin, 1919. In this paper Radin suggests three subgroups of North American languages, the first of which comprises "Salish, Kwakiutl, Kutenai, Algonkin" (p. 492). Perhaps this grouping resulted from discussions between Radin and Sapir, since Sapir had the greater firsthand familiarity with these particular languages.

11 Swadesh, 1953a, 1953b.

12 See my aforementioned paper on *Some Genetic Affiliations of Algonkian* (footnote 2).

13 The possible genetic affiliations of Kutenai (also included as part of Algonkian-Mosan by Sapir) still await methodical investigation.

14 Wolff, 1950.

yet ready to publish the evidence for this statement. There is some published evidence in connection with the words for WATER and LAND in Gulf and Siouan,[15] but this in itself is not sufficient.

Therefore for the purposes of the present paper, this connection is also ignored, again without prejudice.

Hokan-Siouan. In his aforementioned encyclopaedia article, Sapir set up a superstock which he labelled Hokan-Siouan, but he often spoke of this privately as his "wastepaper basket" stock. In it he grouped together the following stocks, families, and languages: Hokan,[16] Yukian,[17] Coahuiltecan (with which he included Tonkawa),[18] Subtiaba-Tlappanec,[19] Keresan, Natchez-Muskogean,[20] Tunican (Tunica, Atakapa, and Chitimacha),[21] Siouan-Yuchi,[22] and Iroquoian-Caddoan.

But our ignorance of the genetic problems involved in the postulated Hokan stock alone is almost as great as our ignorance of the whole of the postulated Hokan-Siouan superstock. Until a great deal more work is done on Hokan, we are not going to be in a position either to affirm or deny Sapir's postulation. Fortunately (and in the nick of time before their extinction), recent fresh field work on a number of Hokan languages in California[23] should soon provide us with the grammatical and lexical information so sorely needed before comparative studies can be seriously undertaken.

In the meantime, I once more ignore (still without prejudice) the possibility of relationship between Hokan and the Gulf languages as subsumed under Sapir's Hokan-Siouan hypothesis.

A NEW AFFILIATION FOR ALGONKIAN

The geographical spread of the Algonkian languages is greater than the spread of any other linguistic family of North America. Tribes speaking these languages

15 Haas, 1951, 1952.

16 Sapir, 1917a, 1917b, 1925.

17 Problems arising from attempts to "classify" Yukian have received new attention in a paper entitled *Some Yukian-Penutian Resemblances* (Shipley, 1957), but no pat solution is yet at hand.

18 Sapir, 1917b.

19 Sapir, 1925.

20 Swanton, 1924; Haas, 1956.

21 Swanton, 1919; Swadesh, 1946b, 1947.

22 A few Siouan-Yuchi comparisons (TWO, BLACK, BRAIN, and BITTER) are provided by Haas, 1951, p. 79.

23 This field work is being sponsored by the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley. Work on Penutian, Uto-Aztecan, and Ritwan languages is also included within the purview of the Survey.

occupied almost the whole of the north central and northeastern part of the continent, with enclaves in the Plains and in the Southeast. In spite of this great spread, these languages are closely related to one another, the degree of closeness being roughly comparable to that which the Romance languages, or the Germanic languages, bear to one another. And even though we can now admit the connection between Algonkian and Ritwan, the fact still remains that no evidence has ever been presented to show that Algonkian is related to anything other than this. On the face of it, then, it seems logical to assume that Algonkian is probably related to some other languages or language families in North America besides Ritwan.

Sapir's postulation of the unproven (though still suggestive) Mosan connection appears to have inhibited any attempts to search for relationships in any other direction. In spite of various hints I had noticed which appeared to point in the direction of a possible relationship between Algonkian and Muskogean, for instance, I myself was surprised at the results which emerged when I finally undertook to make a systematic comparison between these two and also between Algonkian and the rest of the Gulf languages.

My chief descriptive work on the Muskogean languages has centered on Creek. It has long been known to me that there are quite a few Algonkian loanwords in Creek. For example, Creek /pínwa/ 'turkey' is borrowed from Fox /pineʻwa/[24] or some similar language which has /n/ for PCA *l, since the PCA (Proto-Central Algonkian) reconstruction is *peleʻwa 'turkey; fowl'. It is *not* borrowed from Shawnee or from any of the languages of the Peoria group which in recent times were nearer the Creeks in geographical location, since all of these languages have /l/ for *l, and /l/ is also a phoneme of Creek. Further, Creek /pínwa/ is a borrowing of some antiquity since there is internal evidence to show that it is derived from an earlier *piníwa, a form which is even closer to the Fox form than the modern /pínwa/.

Several other examples of Algonkian loanwords in Creek could be cited. And because of this I assumed for a long time that any resemblances noted to Algonkian were the result of borrowing. But about a year and a half ago I decided that the possibility of genetic relationship should not be ruled out until a careful investigation had been made. The results of this investigation, preliminary though they may be, are sufficient, it seems to me, to demonstrate a genetic relationship between Algonkian-Ritwan and the Gulf languages. The location of the languages and language families subsumed under this new relationship is shown on the accompanying map (Fig. 1).

24 This has also been pointed out by Michelson, 1935, footnote 1 on pp. 135-136.

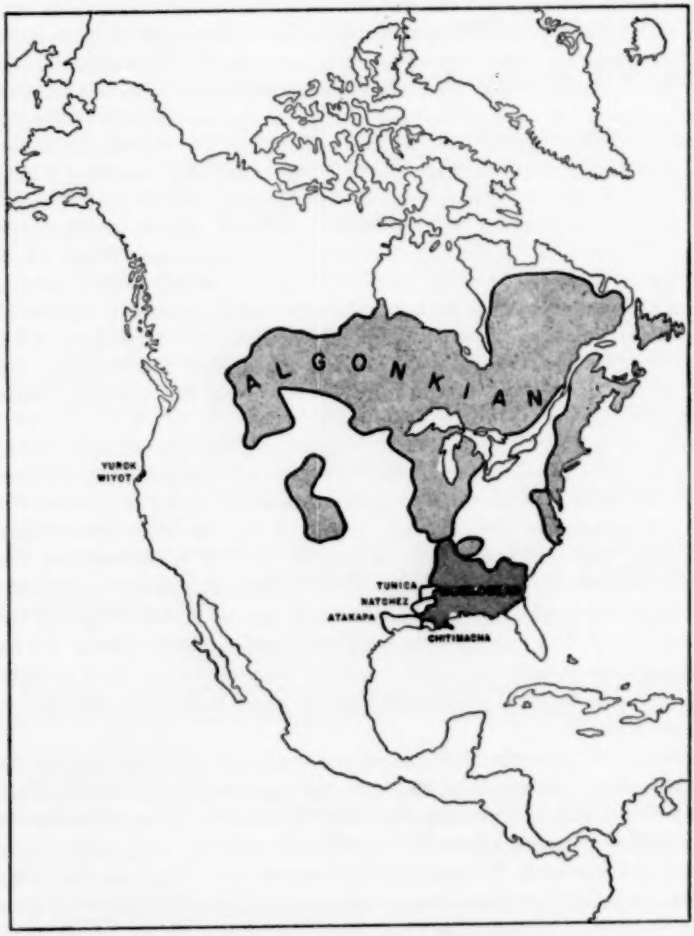

FIG. 1. Algonkian-Ritwan and the Gulf languages.

Synoptic Preview of Algonkian-Gulf

The linguistic evidence presented in support of a thesis of this nature must of necessity be meticulous and detailed, and the main body of this paper is given over to the presentation of the evidence in the prescribed fashion. However, by way of introduction to the thesis, I present a brief synoptic preview of the situation. Twenty-one cognate sets have been chosen for this purpose (see Table 1). The PCA and PM (Proto-Muskogean) forms are reconstructions and are accordingly quoted with preceding asterisk (*).

Table 1

Gloss	*PCA*	*PM*	*Natchez*	*Tunica*	*Chitimacha*	*Atakapa*
Beat	*pak-	–	pa·k-	pʌ́ka	–	pak
Cold	*tahk-	–	takap-	láka	č'aki	–
Cut	*ki·šk-	*kač-	kec-	káhču	–	kec
Die	*nepe-	*ili-	–	lúpi	nu·p-	(pih)
Fish	*name·-	*naNi/u	ʔeN	níni	(ni-)	nti
Hand	*-neθk-i	*-mk^{w}i	–	´-hkeni	–	nok
Name	*-i·n-	–	ʔinu	–	nuy-t-	eŋ
Neck	*-hkwe·-	–	k^{w}aht	–	k'eʔ	koy
Night	*tepeθk-	–	tewe	láwu	t'apk'i	iti
One	*kwet- *nekwet-	–	wi·t-	–	ʔunk'u	(ta) nuk
Scrape	*ka·šk-	*ka·s-	ko·c-	kʌ́sa	k'atka-	kau-š
See	*ne·w-	–	ʔeL-	hʌ́ra	heč-t-	ini
Sharp (en)	*ki·n-t-	*x^{w}ulut-	pilit-	kíri	kihci	kini
Shoot	*pemw-, *-el-	–	-epenel-	–	pa·hma-	pem
Split	*pa·θk-	*pał-	pa·L-	pása	šap-t-	pał
Swallow	*kwan-	*k^{w}alak-	-akun-	kʌ́ra	ka·č-t-	kul
Tail	*-aθany-	*haci	ʔisi	-ása	mahči	–
Three	*neʔθ-	–	ne·-	ʔéni-	–	lat
Through	*ša·pw-	*łuput-	–	šíhpu	–	łop
Tree	*meʔtekw-	*itti/u	cu·	ríhku	šuš	–
Turn	*kwetekw-	–	kitip-	kúra	kut'ih-t-	–

This synoptic preview should be sufficient to demonstrate the genetic affinity of these languages for all practical purposes. The items are taken from the LIST OF COMPARISONS given below. Only one principle of selection was used, namely, that a form cognate to the PCA form be present in at least three of the five Gulf languages. The items which make up the resulting list are all of the type generally considered to be "basic," that is, of a type unlikely to be borrowed. And in spite of the fact that it is often considered easier to find cognates among noun-like words than among verb-like words, a surprising number of the latter turned up as a result of this method of selection.

SOURCES AND ABBREVIATIONS

Algonkian. The immediately following section contains a LIST OF COMPARISONS between Algonkian and/or Ritwan and from one to five of the Gulf languages. The Algonkian forms quoted are usually reconstructed PCA taken from Bloomfield,[25] Hockett,[26] and Michelson,[27] but a few additional forms are taken from Geary[28] and Voegelin.[29] Still other forms are from Siebert,[30] but these are marked PCEA (Proto-Central-Eastern Algonkian) since the revised reconstructions which he proposes are based on evidence found in the Eastern languages only. In so far as possible any inconsistencies between the sources have been removed. This means that all Algonkian forms quoted have been converted to the Bloomfield system of transcription.[31]

Strictly speaking, the type of comparative work I have undertaken in this paper would be greatly facilitated if it were possible to quote true PA (Proto-Algonkian) reconstructions in place of PCA reconstructions. But no thoroughgoing attempt to fit the Eastern languages into the picture has ever been undertaken, and Michelson's attempt[32] to bring the Plains languages into consideration now stands in need of revision. The Bloomfield and Hockett reconstructions are made strictly on the basis of evidence from Cree, Fox, Menominee, and Ojibwa, and for their purposes this is not only the most feasible but also the most commendable procedure. For my purposes, however, it is often desirable to have a revised reconstruction based on Central Algonkian languages other than Fox, Cree, Menominee, and Ojibwa,

25 Bloomfield, 1946.
26 Hockett, 1957.
27 Michelson, 1935.
28 Geary, 1941.
29 Voegelin, 1941.
30 Siebert, 1941.
31 Bloomfield, 1946, pp. 86-89. Substitutions made in Bloomfield's system are described in footnote 48.
32 Michelson, 1935.

or, more rarely (because of the increased difficulty in working with the available material), on evidence from one or more of the Eastern languages. When I have discovered suitable evidence for making such a revised reconstruction, I have done so, but all such reconstructions are marked (Ha) to remove any risk of confusion.

In addition to the revised reconstructions that I have sometimes made, I have also not hesitated to make new reconstructions when, by doing so, I could obtain more evidence for the Algonkian-Gulf relationship. Some of my new reconstructions are made on the basis of very meagre evidence — the materials on Fox, Cree, Menominee, and Ojibwa used by Bloomfield and Hockett exist only in manuscript form and are unavailable to me — but all such new reconstructions are marked (Ha) so that their tentative nature may be known.[33]

Ritwan. The Wiyot forms quoted are taken from Teeter[34] or, when unavailable in his notes, from Reichard[35] or, occasionally, Kroeber.[36] Those quoted from Teeter are unmarked; those from Reichard and Kroeber are converted into Teeter's system of transcription (in so far as possible) but are marked (R) and (K), respectively.

Yurok forms are taken largely from Robins,[37] but a few items are from my own field notes on Yurok and a few others were kindly supplied by Kroeber. Those quoted from Robins are unmarked, but those from my own notes are marked (Ha) and those from Kroeber are marked (K).

Muskogean and the Other Gulf Languages. The Muskogean forms quoted are PM (Proto-Muskogean) reconstructions taken from my own files. The principal sound correspondences and a number of reconstructions have previously appeared in print.[38]

The remaining Gulf languages are all single-language families and therefore actual speech forms are quoted for these in lieu of reconstructed forms. At the

33 It was my original intention, for these tentative reconstructions, to quote whatever material was available to me in the way of supporting forms from the daughter languages. In the end, however, it was decided to omit this material for two important reasons: (1) these supporting forms would tend to distract from the attention being focussed on the relationship between PCA and the several Gulf languages, and (2) they would have lengthened the paper to a virtually prohibitive extent.

34 Teeter, unpublished field notes on the Wiyot language collected in 1956 and 1957 under the sponsorship of the Survey of California Indian Languages (see footnote 23).

35 Reichard, 1925.

36 Kroeber, 1911, pp. 384-413.

37 Robins, *The Yurok Language* (in press); based on field work done in 1952 under the sponsorship of the Survey of California Indian Languages.

38 Haas, 1941, 1946b, 1947, 1949, 1950, 1956.

present time all of these languages are extinct, but in the 1930's it was still possible to obtain fairly extensive materials on Tunica, Chitimacha, and Natchez. Natchez and Tunica are quoted from Haas,[39] Chitimacha from Swadesh,[40] and Atakapa from Gatschet and Swanton.[41] Three dialects of Atakapa (Western Atakapa, Eastern Atakapa, and Akokisa) are known to have existed, but the material on all but the Western dialect is so fragmentary that attempts at reconstruction are rarely possible. For the purposes of the present paper each dialect is quoted separately in those rare instances in which a form has been recorded for more than one dialect. Except when specifically marked otherwise, Atakapa forms are quoted in the Western dialect.

Several attempts at comparing two or more of the Gulf languages have been made from time to time, viz. Tunica, Chitimacha, and Atakapa;[42] Atakapa and Chitimacha;[43] Natchez and Muskogean;[44] and finally, Muskogean, Natchez, Tunica, Chitimacha, and Atakapa.[45] Swadesh has proposed reconstructions for Atakapa-Chitimacha, but these are mostly too tentative to be helpful in making wider comparisons.[46] Other reconstructions based on two or more of the Gulf languages are sporadic.[47] For the purposes of the present paper, then, these earlier reconstructions are usually ignored. More consistency in presentation is possible by comparing each language separately with the PCA form.

Phoneme Inventories

PCA vowels *i *e *a *o (short and long). Semivowels: *w *y. Consonants: *p, *t *c *k *s *š *θ *m *n *l; also *h of limited occurrence. Arbitrary symbols ocurring as prior members in consonant clusters only: *x *ʔ.[48]

39 For Natchez: Haas, unpublished field notes. For Tunica: Haas, 1953.

40 Swadesh, 1946a; also *Chitimacha Vocabulary* (unpublished typewritten ms.)

41 Gatschet and Swanton, 1932.

42 Swanton, 1919.

43 Swadesh, 1946b, 1947.

44 Swanton, 1924; Haas, 1956.

45 The two principal etymologies are those for WATER and LAND; Haas, 1951, 1952. Supplementary reconstructions (some in need of revision) include those for DRINK, FAT, FISH, NAME, NECK, TOOTH, and WANT; Haas, 1951, p. 75.

46 Atakapa and Chitimacha are not closely related. They are not even demonstrably closer to each other than to other Gulf languages. Hence reconstructions based on these two languages only cannot have the kind of validity that exists for reconstructions based on more closely related languages, e.g. those of PCA or PM. This does not mean that reconstructions of the Atakapa-Chitimacha variety should not be attempted; it only means that such reconstructions are more useful in certain contexts than in others.

47 Haas, 1951, 1952, 1956.

48 Bloomfield, 1946, pp. 86-89. Four substitutions are made in Bloomfield's system of transcription, the first three of which are also used by Hockett (1957, pp. 247 and 255). These

Wiyot vowels: /i e a o u/ (a, short only; the rest short and long). Consonants: /p t c č k ʔ b d z ž g β s ł š γ h w y m n l ɾ r/.[49]

Yurok vowels: /i e ə a o u/ (e, short only; the rest short and long). Consonants: /p t c k kʷ ʔ p' t' c' k' k'ʷ s ł š γ h w y m n l r/.[50]

PM vowels: *i *a *u (short and long). Consonants: *p *t *c *č *k *kʷ *s *ł *š *h *xʷ *w *y *m *n *ɴ *l.[51]

Natchez vowels: /i e a o u/ (short and long). Consonants: /p t c k kʷ ʔ s h w y m n l/.[52] An additional vowel /ö/ and additional consonants /W Y M N L/ are of late development.

Tunica vowels: /i e ɛ a ɔ o u/ (short only). Consonants: /p t č k ʔ s š h w y m n l r/.[53]

Chitimacha vowels: /i e a o u/ (short and long). Consonants: /p t c č k ʔ p' t' c' č' k' s š h w y m n/.[54]

Atakapa vowels: (probably) i e a o u (short). Consonants: (probably) p t c k š ł h w y m n ŋ l.[55]

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are: (1) a raised dot for vowel length in place of doubling of the vowel; (2) wedgeless *c in place of *č; (3) *sk in place of the awkward *ɕk; (4) *ʔ for the glottal stop in place of *q used by both Bloomfield and Hockett.

In general it may be said that the exact phonetic nature of the prior member of any PCA consonant cluster (with the possible exception of a nasal prior member) is unknown. Therefore the various nonnasal symbols (*s, *š, *θ, *h, *x, *ʔ, *c) used in this position need not be interpreted as having the values they have when used outside of clusters (if so used). Algonkianists are not disturbed by this since they operate with consonant clusters as units and find that each consonant cluster unit always has the same reflex in each of the daughter languages.

49 Teeter, unpublished field notes on Wiyot. /p t c č k/ are fortis unaspirated stops and affricates; /b d z ž g/ are the corresponding lenis aspirated stops and affricates. /ɾ/ is a voiced flap and /r/ is a voiced retroflex.

50 Robins, *The Yurok Language* (in press). Two substitutions have been made in Robins's transcription: /ə/ is used for the strongly retroflexed vowel written inverted r by Robins; /γ/ is used for the voiced velar fricative (for the sake of readier comparability with Wiyot) in place of /g/ used by Robins. Haas has recorded long as well as short /e/.

51 Haas, 1941; with later modifications suggested in 1947.

52 Haas, 1956.

53 Haas, 1946a. Consonants of foreign origin are omitted in the present list.

54 Swadesh, 1946a. Substitutions are /p' t' c' č' k'/ for the glottalized series of consonants in place of /b d ʒ ʒ̬ ᵛ g/ used by Swadesh.

55 Atakapa was recorded in prephonemic times. The list given here can therefore be only approximately correct, but it represents a carefully considered conjecture based on Gatschet and Swanton, 1932; see also Swadesh, 1946b. The vowels are perhaps the most difficult point to determine; there may have been some long vowels as well as the five short ones listed. In quoting Atakapa forms, modern symbols are substituted; in particular, š for c, c for ts. Some normalization has also been introduced in order to eliminate the necessity of quoting the sometimes considerable number of variant forms found in Gatschet and Swanton.

LIST OF COMPARISONS[56]

ACQUIRE. PCA *tep- (Ha). ||PM *ču·pa 'buy'; Nt ci·p- 'buy'; Tn lápu 'buy'; Cht č'i·pa 'spend (money)'.

BEAT. PCA *pak- (Bl p. 113). ||Nt pa·k-; Tn pᵊka; At pak.

BEAVER. PCEA *ameθkw-a (*-a is anim. sg. suff.) (S). ||Nt ʔemet(e-). —But the Nt word might be a loan from some unknown Alg. source.

BEE. PCA *a·mow-a (Ha). ||Nt moM; Cht (hih) mu; At miŋ, muŋ, 'bee, hornet'.

BELLY. W wi·t- (R) 'have stomach' and -wit- (R) 'become pregnant'. ||Nt ʔiwit 'belly', ʔiwit-ip 'pregnant' ('bellied').

BIG. PCA *meʔθ-, *meʔši (Bl p. 120). ||At mec 'large, tall', hec 'big, large'. —It is doubtful that forms from other Gulf languages are related, but if so, the connection is with the final consonant of PCA only: Nt li·-; Tn tíka; Cht ati.

56 The complete alphabetical list of abbreviations employed in this section is given below:

Ab	Abnaki, an E Alg. lang.; quoted from Rasles, 1833
AI	animate intransitive (verb)
Al	Alabama, a Musk. lang.; quoted from own field notes
Alg.	Algonkian
anim.	animate gender
At	Atakapa, a Gulf lang.; quoted from Gatschet and Swanton, 1932
Bl	Bloomfield, 1946. When followed by a plain number the reference is to the number of the reconstruction; otherwise the abbreviation is followed by a page number referring to the same work.
Bl Lg.	Bloomfield, 1925, 1941. Always followed by a page number; pp. 130-156 inclusive indicate the 1925 article while pp. 292-297 are from the 1941 article.
C	any consonant
C	Cree, a C Alg. lang.; quoted from Bl, H, or Lacombe, 1874
C Alg.	Central Algonkian
Ch	Choctaw, a Musk. lang.; quoted from own field notes or Byington, 1915
Cht	Chitimacha, a Gulf lang.; quoted from Swadesh, *Chitimacha Vocabulary* (typewritten unpublished ms.)
Cr	Creek, a Musk. lang.; quoted from own field notes
D	Delaware, an E Alg. lang.; quoted from Voegelin, 1946
E Alg.	Eastern Algonkian
E dial.	Eastern dialect of At
F	Fox, a C Alg. lang.; quoted from Bl or H
G	Geary, 1941
H	Hitchiti, a Musk. lang.; quoted from own field notes
H	Hockett, 1957; followed by a plain number referring to the number of the reconstruction
Ha	Haas; for PCA or PCEA reconstructions not otherwise available; also a few Yurok words taken from own field notes
II	inanimate intransitive (verb)
inan.	inanimate gender
intr.	intransitive (verb)

BLACK. PCA *kaθk- (H 24). ||Nt ka$^{?}$ahs- 'blue, bruised', kasa·ht- 'gray'; Tn k$\acute{o}$ta 'gray'; Cht kat'i- 'blue, green'.

BLOOD. See RED.

BLOOM (verb). PCA *peQk- (Q = C other than n, s, š) (Ha.) ||PM *pak-. —Sometimes rdpl. both in Alg. and in Musk., e.g. Sh pa$^{?}$pe$^{?}$ki 'blooming'; Cr pakpak-íta 'to bloom'.

BLOW (WITH MOUTH). PCA *-pw- 'with mouth' (Bl p. 114). ||PM *pu·x^{w}-; Nt pu·w-; Cht pu·h-; At pun.

BONE. PCEA *-aθkan-; *waθkan-i 'his bone' (*-i is inan. sg. suff.) (S). W watkaṛ-; Y wəlkɔ·$^{?}$. ||PM *-x^{w}uni, *-x^{w}k^{w}uni; Nt $^{?}$ek^{w}el (e-).

BRAIN (HEAD). PCA *-temp-i (V); with a possible variant *-ntep-i (Ha) (cp. Mi andäpi).[57] ||PM *-lupi 'brain'; Nt $^{?}$eten 'hair of head'. —PM *-lupi goes

K	Kickapoo, a C Alg. lang. very close to Fox; quoted from own brief vocabulary
K	Koasati, a Musk. lang.; quoted from own field notes
K	Kroeber, 1911; also a few words from his unpublished notebooks; for Wiyot and Yurok not otherwise available
M	Menominee, a C Alg. lang.; quoted from Bl or H
M	Michelson, 1935; always followed by page number
Mi	Miami, a C Alg. lang.; quoted from Voegelin, 1937-40
Musk.	Muskogean
Nt	Natchez, a Gulf lang.; quoted from own field notes
O	Ojibwa, a C Alg. lang.; quoted from Bl, H, or Baraga, 1878
eO	Eastern Ojibwa; quoted from Bloomfield, 1957
PAR	Proto-Algonkian-Ritwan; see Haas, 1958a
PCA	Proto-Central Algonkian; quoted from Bl, H, Ha, G, or V and so marked
PCEA	Proto-Central-Eastern Algonkian; quoted from S or Ha and so marked
PG	Proto-Gulf; Haas, 1951, 1952
pl.	plural (number)
PM	Proto-Muskogean; quoted from own files
R	Reichard, 1925; a source for W
rdpl.	reduplicated
S	Siebert, 1941
sg.	singular (number)
Sh	Shawnee, a C Alg. lang.; quoted from Voegelin, 1937-40
TA	transitive animate (verb)
TI	transitive inanimate (verb)
Tn	Tunica, a Gulf lang.; quoted from Haas, 1953
tr.	transitive (verb)
V	any vowel
V	Voegelin, 1941
W	Wiyot, a Ritwan lang.; quoted from Teeter's unpublished field notes or else from R or K and so marked
W dial.	Western dialect of At
Y	Yurok, a Ritwan lang.; quoted from Robins, *The Yurok Language* (in press) or else from Ha or K and so marked

57 Michelson, 1939, p. 105.

best with PCA *-ntep-i (PM *l corresponding to PCA *n), but Nt ʔeten goes with PCA *-temp-i.

BREATHE. PCA *leˑ- (Bl p. 90). ||Nt h-eleksen-ʔis; Tn lɬha 'pant' (cf. hɬha 'breathe').

BROTHER (OLDER). PCA *-ʔθ-; *neʔθ- 'my older brother' (M p. 140). ||Tn -hta- 'older sibling', as in -htátʔɛ 'older brother (of m.), -htáti 'older sister (of w.)'.

CEDAR. PCA *kiˑšehk- (H 90). Y kiˑł 'redwood'. ||Tn ʔékša 'pine'; At kišuš 'cedar' (E dial.). —In view of its divergent gloss the Tn word may not be related. But if related, it shows a prothetic vowel; see also THREE below.

CLOSE (verb). See COVER (2).

CLOSE EYES. PCA *toˑsk- 'open slightly, peep (relating to sight)' (G). ||Nt toc-; Tn lɬhča.

COLD. PCA *tahk- (Bl p. 120). ||Nt takap-; Tn láka 'frost'; Cht čʾaki.

COPULATE. PCA *-qpani 'vulva' (Ha) (Sh -ʔpani). Y weyłpoˑł 'her vulva' (K). ||Tn pári 'copulate'.

COVER (1). PCA *pet- (Ha). W pel 'wide' (K). ||PM *pata- 'spread', *patha 'wide'; Nt pet- 'spread', ʔepet- 'wide'.

COVER (2). PCA *kep- 'closed, blocked' (H 54); also includes derivatives with meanings like 'covered, enclosed, locked'. ||Nt kap- 'cover, wrap'; Tn kɔ̀hpa 'bar, shut in, shut out'.

CRAWFISH. PCA *aqša·keˑw-a (Ha). ||PM *sakči/u.

CROW (bird). PCA *aˑnteˑkw-a (Ha). ||PM *lakca; Tn ʔɬla.

CRY (WEEP). PCA *seˑkw- (or *siˑkw- ?) (Ha). W -likwł-. ||Nt ceˑk-.

CURE (HEAL). *peθak- (could be *pelak-) (Ha). ||At peni.

CUT (SEVER). PCA *kiˑšk- (H 92). ||PM *kač-; Nt kec- 'break in two'; Tn káhču 'break in two'; At kec (E dial.), kuc (W dial.) 'break'.

DAUGHTER. PCA *-taˑn-a (M p. 139). W toŗ 'son, father'. ||At teŋ 'mother, daughter' (E dial.), 'mother' (W dial.).

DAY. PCA *kiˑšek- 'day, sky' (H 91). W kažoʔy- 'day-time'; Y kecoy- 'be daylight'. ||Nt ʔisak 'sky, above'; At lak 'sky' (E dial.). —For another k/ʔ correspondence between PCA and Nt see LEG.

DEER. PCA *atehkw-a 'caribou' (Bl 174). W holakw. ||PM *ici/u, *icci/u; Nt caˑ.

DEFECATE. PCA *miˑs-, *miˑt- (Bl pp. 92, 120). ||Nt mis- 'stink'; Tn námi 'stink'; At iš 'stink, rotten'.

DIE. PCA *nepe- (Bl p. 97). ||PM *il-, *ili-; Tn lúpi; Cht nuˑp-. —Perhaps cp. also At pih.

DIG. PCEA *wa·l- (Ha). W walu$^{?}$ł 'dig well', waluł 'well'. ||PM *wil- 'root up'; Tn wéra 'dig'.

DIP. PCA *kap- 'out of liquid' (H 17); also occurs in derivatives with meanings such as 'takes food from kettle, dishes out food'. ||PM *kax^{w}-; Nt kaw-; At škop 'dipper'.

DOG. PCA *aθemw-a (Bl 1). ||Tn sá.

DRINK. PCA *mene (Bl p. 98). W βaṛo-; Y meno(k^{w}olum)- 'gulp down'. ||PM *mil- 'swallow'; Tn míru 'swallow'; At mol 'gargle'.

DRY. PCA *ka·sk- (H 34). Meaning queried by H, but examples include words having such meanings as 'piece of dried meat', 'it gets dried up in the heat'. ||Nt ka·s- 'to parch (meal)'.

DUST. PCA *penkw-i 'dust, ashes, powder' (G). ||Nt pokah- '(make) dusty'.

DWELL. PCA *wi·k- (Bl p. 121), *wi·kiw-a 'he dwells' (Bl 387). ||PM (H only): H wi·k- 'live, dwell (dual)'; Tn $^{?}$úki 'sit, dwell', $^{?}$úkiwi 'he sat, dwelt'.

> *Note.* H has a set of three suppletive verbs meaning 'live, dwell', viz. cuku·l- (sg.), wi·k- (dual), iɬ- (pl.). It is generally safe to assume that residua of this nature are of considerable antiquity since analogical leveling has clearly been inoperative in such instances.

EAR. PCA *-hta·waka·y- (V); *wehta·waka·y-i 'his ear'. ||Tn -álawéča 'ear', $^{?}$ólawéča 'his ear'.

EAT. PCA *amw- TA (Bl p. 114). ||PM *impa (tr.), *humpa (intr.).

EXTRACT LIQUID. PCA *si·n- (Ha); occurs in derivatives with meanings such as 'squeeze out juice', 'milk cow', etc. ||Nt cil-; Tn číra . . c . 'to milk (cow)'.

EYE. PCA *-ški·nšekw-, *neški·nšekw-i 'my eye' (Bl 39). W ṛali·ṛ 'my eye'; Y neylin 'my eye' (Ha). ||PM (Ch only): Ch -niškin 'eye'. —Perhaps cp. also Cht kani.

> *Note.* Possibly Ch -niškin is a borrowing and not a cognate. If so, its final /n/ shows it could have been borrowed only from an Alg. language which preserves -n- in -nC- clusters, e.g. from O niški·nšik 'my eye' or D nə́škinkw, but *not* from F, C, M, or Sh. Furthermore, whether borrowing or cognate, Ch has taken the first person prefix as a part of the stem.

FAR. PCA *pelaw- (Ha). ||At pel.

FATHER (1). PCA *-e·hθ- (?); *o·hθ-ali 'his father' (Bl 105) (< earlier *we·θ-ali ?; -ali is obviative sg. suff.). ||Tn -ési; $^{?}$ósi 'his father'.

FATHER. (2). Y -psec. ||Nt $^{?}$ipis.

FATHER (3). W to$^{?}$š; Y to·t (voc.) (Ha). ||PM (Al, K only): Al, K -ta·ta; Nt te·teh 'grandfather'; At hitet, itet 'father'. —This may be an independently developed *nursery word* in each of these languages.

FATHER-IN-LAW. W wagas- 'his father-in-law' and wagat- 'his mother-in-law'. ||Nt wakat 'father-in-law'. —If the Nt word is related to the W words, Nt has incorporated the old third person prefix w- as part of the stem.

FEAR. PCEA *kwe$^{?}$- (Ha); *ko$^{?}$- (H 98) (only with *-t or *-θ as root extensions). Y $^{?}$ek^{w}eył (pel) 'afraid'. ||Nt k^{w}alat- 'get frightened'.

FISH. PCA *name$^{\cdot}$- (root), *name$^{\cdot}$kw- (stem), *-ame$^{\cdot}$kw- (non-initial); also a stem *name$^{\cdot}$w- 'sturgeon' (Bl pp. 105, 107). Y nepuy 'salmon'. ||PM *NaNi/u; Nt $^{?}$eN; Tn níni; At nti. —In addition Cht may have preserved a piece of the old root in ni-pi 'fish scale' and ni-mi 'having a fish-like odor'.

FLOAT. Y peno ($^{?}$menew). ||PM *pal-; Tn póru; At pol.

FOAM. PCA *pi$^{\cdot}$$^{?}te^{\cdot}$w-i (M p. 169). ||Tn púhti.

FOOT. (1). PCA *-ešk- '(action) by foot' (Bl 266). ||Tn -áška 'foot' (possessed noun).

FOOT (2). See LEG.

FOREHEAD. PCEA *-θkahtekw-, *weθkahtekw-i 'his forehead' (S), *meθkahtekw-i 'someone's forehead'. W watβa$^{?}$t 'head'; Y mołk^{w}oh 'head'. ||PM *-k^{w}itakla 'forehead; face'; Nt $^{?}$ukt 'forehead'; Cht kut 'head'; perhaps also At ice 'top of head'. —W has taken the third person pref. *w(e)- as part of the stem whereas Y has taken the indefinite person pref. *m(e)- as part of the stem. PM may show metathesis of PCA k and kw.

FULL. PCA *mo$^{\cdot}$ški- 'fill' (M p. 151). ||Tn mólu; At puk. —For another m/p correspondence between PCA and At see RED.

GIVE. PCA *mi$^{\cdot}$-l- (*-l is a transitivizing suff.) (Bl 81). ||PM *ima; At miš.

GREASE. PCA *mak- (Ha) (cp. Mi mäkkawakiki 'greasy') and perhaps there was also a longer stem *nama$^{\cdot}$kw- (?) (cp. O namâkwiwin 'grease to anoint the head'; Baraga). ||PG *nemak^{w}a:[58] PM *nihaka (or *nihak^{w}a); Nt nehk^{w}; Tn máka; Cht nema; At eŋ. —If a PCA form *nama$^{\cdot}$kw- (or something very similar) can be validated, this will be a very remarkable set since there are good correspondences in all five of the Gulf languages.

GRIND. See SHARP (EN).

GULL. See HAWK.

HAIR (FOLIAGE). PCA *-šky- 'hair, leaf, foliage' (Ha). ||PM *-hisi, *-hiski 'hair, feathers, leaves, foliage'.

HAND (1). PCEA *-neθk-i 'hand' (S). ||PM *-mk^{w}i, *-lk^{w}i, *-lk^{w}aki; Tn -éhkini; At nok 'arm'.

58 Haas, 1951, p. 75.

Note. A plausible explanation of the PM variants *-mkʷi, *-lkʷi appears on comparison with PCEA *-neθk-i. Assuming varying syncopation conditions, PM *-mkʷi goes with *-n(e)θk-i (cp. Sh -nʔki ~ -neʔki) and PM *-lkʷi goes with *-(ne)θk-i; for a similar correspondence to *-θk-, see WOMAN below.

HAND (2). W weʔs; Y cewes. ||Nt ʔiˑs; Cht waši; At wiš (E dial.), woš (W dial.). —Perhaps cp. also Tn -waš in -tírwaš 'nail, claw'.

HAWK. PCA *ki/ayaˑHkw-a 'gull', *ki/ayaˑHkw-aki, pl. (*H = unknown prior member of a consonant cluster) (Ha; slight revision of H 28 based on C kiyaˑsk, Mi kiyahkwa, quoted by S). ||PM *kʷiyaˑnkak (Ch biyaˑʷkak; Al, K biyakka; Cr kiyaˑkka); Nt kiyaˑs.

Note 1. The resemblance between the PCA and PM reconstructions is such that we might have a borrowing on the proto-language level, but it cannot be determined in which direction. If PM borrowed from PCA, the pl. form was taken as basic; if PCA borrowed from PM, the form was interpreted as a pl. and the sg. was formed by reduction.[59]

Note 2. The Nt word is very probably a borrowing from some Alg. language which has -sk- or -šk- in this word. The first choice of a source would be C kiyaˑsk (which the Nt word also resembles in vowel of first syllable) and second choice would be O kayaˑšk.

HE. See PRONOUN (THIRD PERSON).

HEAD (1). PCA *-iˑθ-, *-iˑši (Ha). ||Tn -ésini.

HEAD (2). See BRAIN.

HEAD (3). See FOREHEAD.

HIDE (CONCEAL). PCA *kyaˑ- (H 124); also with *-t, *-θ and other extensions, e.g. *kyaˑt- TI. Some languages also show an inserted vowel, e.g. Sh kiyaˑ-. Y həkʼəy-. ||Nt kʷeyeˑ-, kʷeˑt-; Tn wata . . c . ; Cht ʔiki-. —The first Nt stem and the Cht stem appear to go with PCA *kyaˑ-, the second Nt stem and the Tn stem with *kyaˑt-.

HIDE (noun). See SKIN.

HOT. PCA *kešy- 'hot, heat' (H 58); cp. also *kešiteˑwi II 'it is hot'. W kłat. ||Nt keˑs- 'to sweat'.

I. See PRONOUN (FIRST PERSON).

IN. PCA *-enki 'in, at' (Bl p. 91). Y -ik. ||Nt -k (suff.); Tn ki- (preverb) and kíču (postposition); Cht -ŋki (after V), -ki (after C); At ki, kin.

JAW. PCEA *netaˑhpixkan-i 'my jaw' (S), but the reconstruction is queried by S since the forms in the daughter languages do not exactly match. ||PM

59 Haas, 1958b.

*-na/utakx^{w}a, *-nutak^{w}xa; Nt ʔiNk^{w}(a-). —The PM and Nt forms may have incorporated the first person prefix as part of the stem; or perhaps PCEA had an alternant with *n; cp. Mi andampikani 'jaw'.

JOINED. PCA *takw- (Ha). ||PM *-tuk-, *-tuluk- 'joint (of ankle, wrist)'. —Perhaps cp. also Tn tépi.

LAND (GROUND). PCEA *-axkamekw- (S). W laγaṛakw-; Y łkeł. ||PM *ihakani (ka); Cht ney; At ne. Perhaps cp. also Tn háli. —An m/n correspondence is assumed; see also FISH, WAR, WINTER.

LEAF. See HAIR.

LEG (FOOT). PCA *-ka·t- (medial; Bl p. 119), *-xka·t- (possessed noun stem), e.g. *wexka·ci (*t > *c before *i) 'his leg' (S). W wačko·č; Y wacka 'foot' (Ha). ||Nt ʔa·t 'foot, leg'; At hikat, ikat 'foot'. —The W and Y forms (with incorporated third person pref.) are to be compared to PCA *wexka·ci. The Nt and At forms are to be compared to PCA *-ka·t- (medial); for another k/ʔ correspondence between PCA and Nt see DAY.

LIGHT (IN WEIGHT). W šop-; Y sə·pən-. ||Nt sapat-. —Perhaps cp. also At łau.

LIVER. PCEA *weθkwan-i 'his liver' (S). W watwaṛ; Y wəlkun (Ha). ||Tn -élihka 'liver', ʔólihka 'his liver'.

LOOK. PCA *-a·p-, variant of *wa·p- (Bl p. 110); also with related meanings, as in Sh -a·pi 'looking, eyes' and -a·pe 'eyes, face'. ||Nt ʔapo· 'head'; Tn pó 'look'.

MALE. PCA *-a·pe·w- (used in secondary derivation; Bl p. 107). Y peγ-, as in peγił 'male', peγak 'man'. ||At hipa, ipa 'husband'.

MATTER (PUS). PCA *mely-i (M p. 143). ||At mil. —This meaning occurs clearly only in the At expression mil ka wol 'sore eyes, eyes making mucus' (ka 'make'; wol 'eye').

MOUTH. PCA *-to·n-; *weto·n-i 'his mouth' (M p. 139). W walul- 'his mouth'; Y weluł 'his mouth' (Ha). ||Tn ′-lu 'tongue', ʔúlu 'his tongue'. —Perhaps cp. also PM *-cuk-.

NAME. Pre-PCA *-i·n- (root); PCA *wi·n-l- TA, *wi·n-t- TI (Bl p. 115). W ṛi·n-; Y weγen(oy)- 'be named'. ||Nt ʔinu- 'name' (possessed noun); Cht nuy-t- 'call by name'; At eŋ 'name' (noun).

> *Note.* Bl points out that "some [PCA verb] roots . . . are derived from stems and themes, largely from nouns with the third person prefix we-" (p. 121) and cites as an example *wi·k- 'dwell' as a derivative of *-i·k- 'dwelling'. I believe *wi·n- 'name' (verb) is an exactly parallel instance derived from an old noun root *-i·n- by incorporation of *w(e)-. In W ṛi·n-

it is the first person pref. *ṛ-* (corresponding to PCA **ne-*) that has been incorporated.

NECK (1). PCA **-hkwe·-* (medial); **-hkwe·kan-* (possessed noun stem) (V). Y pehtun 'neck' (Ha). PAR **-kʷe(·)t/kan* (PAR **kʷ* > Y */p/*). ||Nt kʷaht; Cht k'e^{2} 'neck (esp. of animals)'; kiti 'neck (of person)'; At koy, 'throat, neck'. —The k/t correspondence between PCA and Y is unexplained, but observe that the Nt form and the second Cht form also have t.

NECK (2). PCA **-leskw-a* 'neck gland, tonsil' (G). ||PM **nukkʷi* 'neck, throat, larynx'.

NEGATIVE. PCA **kat-* (H 23). W ko-. ||PM **-iku* (and other allomorphs); Nt kat- 'fail', katih 'not'; Cht k'ay- 'not'.

NIGHT. PCA **tepeθki* (Ha) (**-θk-* on the PCA level might be either **-θk-* or **-xk-* on the PCEA level). ||Nt tewe; Tn láwu; Cht t'apk'i 'dark'; At iti.

ONE. PCA **kwet-*, **kot-* 'one, other' (Ha); **nekwet-*, **nekot-* 'one'; **kwetak-*, **kotak-* 'other' (**kotak-*, H 103). W ku^{2}c; Y koht- (with certain classifiers). ||Nt wi·t- (wi·ta·ɴ 'one', wi·ta·h 'other'); Cht ^{2}unk'u; At (ta)nuk (W dial.), (ha)nik (E dial.).

Note. The PCA forms **kwet-*, **nekwet-*, and **kwetak-* are modified reconstructions based on D, Mi and other evidence; F, C, M, O evidence gives **nekotwi* 'one' (Bl 348) and **kotak-* 'other' (H 103). The W, Y, and Nt forms are to be compared to PCA **kwet-*, **kot-*; the Cht and At forms to PCA **nekwet-*, **nekot-*.

OPEN. PCA **taw-* (Ha). ||Nt taw- 'open it up (e.g. book)'.

OTTER. PCA **nekekw-a* (M p. 155). ||Tn núhki.

PLURAL. PCA **-aki*, anim. pl. in noun and verb (Bl p. 95), e.g. **elenyiw-a*, **-aki* 'man, men'; **pema·tesiw-a*, **-aki* 'he lives, they live'. ||PM (Cr only): Cr -aki (in nouns), -ak- (in verbs), e.g. huktí·, hukt-akí 'woman, women'; nis-íta, nis-ak-itá 'one to buy, several to buy'. Nt -Vpi- (in verbs), e.g. hanol^{2}is, ha-·pi-nol^{2}is 'one to sleep, several to sleep'.

Note 1. The possibility that Cr -aki, -ak- is a borrowing rather than a cognate should not be ruled out entirely. An argument in favor of the possibility of borrowing is the fact that the other Musk. languages have other pl. formations not cognate with the Cr ones. And perhaps if Cr had -aki only as a noun pl., the argument could rest there. But Cr has the allomorph -ak- as a verb pl., and here it is so deeply embedded in the structure of the verb that it is difficult to conceive of it as a borrowed morpheme. In the Cr verb, -ak- is a thematic suffix added directly to the stem, and, when it is the final

suffix in a given verb theme, it undergoes all the ablaut variations of a Cr verb, e.g. nis-ak-itá 'several to buy'; nis-a·k-is 'several are buying'; nis-áhk-is 'several bought'; nis-ă·nk-is 'several keep buying'.[60]

Note 2. Bl cites a special pl. used in forms of address in Fox but does not give a PCA reconstruction (Bl p. 95), e.g. F ineniwe, ineniwe-tike 'man! men!'; cp. eO -tik ~ -tok (perhaps from earlier *-tiki ~ *-toki). This too has a resemblant form in Cr, viz. -ta·ki, pl. suff. used with a few nouns referring to people, e.g. hunánwa, hunan-tá·ki, 'man, men'. Here the possibility of borrowing is much stronger than in the case of Cr -aki. A possible source for Cr -ta·ki is an O dialect; observe the alternant cited for eO.

POSSESSED THEME. PCA *-em-, suffix (Bl p. 95) used in alienable possession, e.g. *ehkw- 'louse' + *-em- > *ehkom-, possessed theme, as in *ketehkoma 'thy louse'. ||PM *im-, prefix used in alienable possession (occurring in *all* of the Musk. languages), e.g. Cr im- + ícka 'louse' > imícka, possessed theme, as in cimícka 'thy louse'. —Many languages distinguish inalienable and alienable possession in one way or another. The striking feature that relates PCA to PM is the cognation in form and function of PCA *-em- and PM *im-.

PRONOUN (FIRST PERSON). PCA *ne-, prefix used with nouns and verbs (Bl p. 95). W r-; Y ne-. PAR *ne-. ||PM *anu, *ani 'I' (independent pron.) and *-li, suffix used with verbs; Nt n-, rare prefix, and -n(is), common suffix (both used with nouns); Tn -ni, suffix used with verbs.

Note. The difference in consonantism between PM *anu, *ani and PM *-li is not yet explainable. When PM *l corresponds to PCA *n, we usually expect Nt /l/, Tn /ɾ/, but when PM *n corresponds to PCA *n, we expect Nt /n/, Tn /n/, the reflexes actually attested here.

PRONOUN (SECOND PERSON). PCA *ke-, prefix used with nouns and verbs (Bl p. 95). W g-; Y k'e-. PAR *k'e-. ||Nt -p(is), suffix used with nouns; Tn wi-, second person masc. sg. prefix used with nouns.

PRONOUN (THIRD PERSON). PCA *we-, *o-, prefix used with nouns; *-w-, suffix used with verbs (Bl p. 95). W w-; Y we-. PAR *we-. ||Tn ʔu-, third person masc. sg. prefix used with nouns, and -wi, third person masc. sg. suffix used with verbs.

Note. In many CA languages *we-, *o > o-, ho-. Observe the striking parallelism between Sh and Tn in Sh ho-to·n-i 'his mouth'; Tn ʔú-lu 'his tongue'. Parallelism between PCA and Tn in the use of the third person suffix with verbs is seen in PCA *nep-w-a 'he dies'; Tn lúpi-wi 'he died'.

RACCOON. PCA *e·ɋsepan-a (Ha). ||PM *sawi/a; Tn yíši.

60 Haas, 1940, p. 143.

RECIPROCAL. PCA *-iti (Ha), AI final, e.g. eO niss-itu-wak 'they kill each other'. ||PM *iti-, *ihti-, prefix, e.g. Ch iti-bi 'to fight' (lit., 'to kill each other').

RED (BLOOD). PCA *meskw- 'red; blood' (Bl p. 120). ||Nt ʔic 'blood'; At pošk 'blood'. —For another m/p correspondence between PCA and At, see FULL. Perhaps Tn míli 'red', Cht pini- 'red' are also connected in some way.

RING (verb). W -loʔn-. ||PM *camak-; Nt caˑN-; At lon 'hum, roar'.

ROAD. PCA *myeˑw-i (Ha). ||At miš.

SCRAPE. PCA *kaˑšk- (H 36). ||PM *kaˑs-; Nt koˑc- 'to comb' (also kʷaˑt- ~ koˑt- 'to scrape'); Tn kɔ́sa; Cht kʼatka-; At kau-š 'to comb'.

SEE. PCA *neˑw- (Bl 336). Y new-. ||Nt ʔeL-; Tn héra 'watch, guard'; Cht heč-t- 'watch, guard'; At ini 'search'.

SHAKE. PCA *neki- (?) (Ha). ||PM *nikiˑ-, *nikuh-.

SHARP (EN) (GRIND). PCA *kiˑn-, *kiˑn-t- (Ha), *kiˑn-l- (H 85). Y kʷereʔwey- 'pointed'. ||PM *xʷulut- (Cr -fulut- 'grind up fine'); Nt pilit- 'grind up fine'; Tn kíri; Cht kihci-; At kini.

SHOOT (1). PCA *pemw- (Bl 315). ||Nt -epenel- (h-epenel-ʔis); Cht paˑhma-; At pem. —See *Note* under SHOOT (2).

SHOOT (2). PCA *-el- TI verb final, paired with *-elaw- TA verb final (Bl p. 115), e.g. *went-el-amwa TI 'he shoots it from there' (*went- 'there') (Bl 329). ||Nt -epenel-.

> *Note.* The Nt root -epenel- seems to have two parts, historically speaking, (1) -epen-,[61] comparable to PCA *pemw- (above), and (2) -el-, comparable to PCA *-el-. If so, this is a remarkable comparison. Nt has preserved in one morpheme (synchronically unanalyzable) what corresponds to two PCA morphemes which, though the same in meaning, are never combined in PCA. Alg. languages are noted for semantic doublets of this sort. Some are phonologically similar, at least in part, but others (as in this example) are phonologically quite dissimilar.

SKIN (HIDE). PCA *loˑk- (could be *θoˑk-) (Ha). ||Nt toloks.

SKIN (verb). PCA *šaˑk- 'stripped' (Ha) (Sh šaʔšaˑk-, rdpl.). ||PM *łuxʷ, *łuˑxʷ-.

SKUNK. PCA *šekaˑkw-a (Ha); PCEA *šekaˑnkw-a (?) (Ab segank8) (Ha). ||Nt sic; Tn šiki; At šiki (tiš). —Perhaps cp. also PM *kuni/u if PCEA *šekaˑnkw-a (?) can be validated. (Eng. *skunk* is borrowed from an E Alg. lg.)

SKY. See DAY.

SLEEP. PCA *nepaˑ- (Bl p. 97). ||Nt newa- 'sleepy'; Tn rápu 'sleep'.

61 It is assumed that Nt has /n/ in -epen- as a result of dissimilation from the preceding labial stop.

SMELL. PCA *mya·- (Bl Lg. p. 139). ||Nt mak-; At hima.

SNOW. PCA *ko·n- (H 113). ||Nt ko·wa.

SON. PCA *-kwi-ʔs-a (Bl p. 89). ||Tn -éhku 'offspring'.

SOUND (verb). PCA *-we·- (root, Bl p. 118). ||Tn wí.

SPIT. PCEA *sekw-i (or *sehkw-iʔ) (Ha). W pałuk- 'spit out'; Y ləhpə (yeł) 'spittle'. ||PM *tuxʷ-; Nt cuh-; Tn čúhu.

SPLIT. PCEA *pa·θ-k- 'break open' (S). ||PM *pał-; Nt pa·ʟ-; Tn pása; Cht šap-t- (if metathesis is assumed); At pał.

SPOTTED. PCA *ketak- (H 62). W taɣalatk-; Y təɣəʔy k'əʔəy-. ||PM *tak-, *tuk-; Nt cuk- (rdpl.); Tn kéra; Cht tek- (rdpl.); At tek- (rdpl.).

SQUIRREL. PCEA *anikw-a (Ha), but D xáni·kw points to some kind of fricative initial C in place of zero. Y pli·ʔw (Ha). ||PM *ixʷaNi/u (Ch fani; Al, K ipłu; H hi·ł-; Cr íłu).

> *Note.* The /x/ of D xáni·kw and the /p/ of Y pli·ʔw both point to some kind of labialized stop or fricative on the PAR level, the word being tentatively reconstructed as PAR *(kʷ)aNikw ~ *kʷNi·kw; such an initial C would correspond neatly to *xʷ in PM *ixʷaNi/u. Observe also the striking resemblance (though by different routes of development) between Y pli·ʔw and Al, K ipłu.

STINK. (1). PCA *pet- (*t > *c before i or y; Mi päciani, nimbici 'I stink') (Ha). W pi·r- (R). ||Nt pic- 'break wind'; Tn púhču 'break wind'.

STINK (2). See DEFECATE.

STONE. PCA *aʔseny-a (Bl 87). ||PM *tali.

SWALLOW (THROAT). PCA *kwan- (Ha), *ko(·)n- (with *-t or *-θ) (H 96). ||PM *kwala-k- 'gulp, swallow'; Nt -akun- (h-akun-ʔis 'swallow; throat'); Tn kɔ́ra 'drink'; Cht ka·č-t- 'drink'; At kul 'swallow'.

SWELL (verb). W puš-. ||Nt pi-; Tn púhti; Cht p'is-; At peu.

SWING (verb). PCA *lo·p- (Ha) (could be *θo·p-; Sh lo·p-). ||Tn sówi.

TAIL. PCA *-aθany- 'tail', *waθany-i (M p. 162) 'his tail'. W wadi·ʔl 'his tail'; Y wəłəy 'his tail'. PAR *wacany- 'his tail'. ||PM *-haci; Nt ʔisi; Tn -ása (ʔɔ́sa 'his tail'); Cht mahči.

TALK. PCA *kaθo·-, also *keθo- (H 68). ||PM *ka-; Nt we·ʟ-; At wan.

TAPERING AT BASE. PCA *le·p- (could be *θe·p-; Sh le·p-) (Ha). ||Tn lóhpu 'pear-shaped'.

TEN. PCA *meta·(tah)θwi (M p. 139). ||Tn míču.

THINK. PCA *-e·le- (non-initial) (Bl p. 90). ||PM *a·lu; Nt -el- in h-el-cokoʔis 'to learn', h-el-pu·nan-ʔis 'to decide, think about'; Tn -érusa 'to know'.

THREE. PCA *ne$^{?}\theta$-, *ne$^{?}\theta$wi (Bl 350). W ṛi$^{?}$g-; Y nahks-. ||Nt ne$^{\cdot}$-ti$^{\cdot}$; Tn $^{?}$eni-hku; At lat.

THROUGH. PCA *ša$^{\cdot}$pw- (M p. 147). ||PM *li/upu-t- 'go through'; Tn šihpu 'pierce'; At łop 'stick in'.

TOUCH. PCA *peqš- (?) (Sh pe$^{?}$š-) (Ha). ||PM *put-, *puč-k-; Nt po$^{\cdot}$-.

TREE (WOOD). PCA *me$^{?}$tekw- (Bl 63); *-a$^{\cdot}$htekw- (non-initial) 'tree, wood' (Bl p. 106). W -o$^{\cdot}$ti$^{?}$; Y tepo$^{\cdot}$. ||PM *itti/u; Nt cu$^{\cdot}$; Tn ríhku; Cht šuš.

> *Note.* In comparing PCA *me$^{?}$tekw- with PM *itti/u it is assumed that the Alg. form has a prefix *m(e)- (perhaps the indefinite prefix); observe the obvious relationship between PCA *me$^{?}$tekw- and *-a$^{\cdot}$htekw-. And for possible comparison with *-a$^{\cdot}$h- in PCA *-a$^{\cdot}$htekw-, observe Musk. Hitchiti ah- 'tree, wood', a stem which is not derivable from PM *itti/u and cannot be assumed to be connected with it except through some intermediary form like PCA *-a$^{\cdot}$htekw-.

TRUE. PCA *te$^{\cdot}$pw- (Ha). ||Tn lápu 'good'.

TURN (CIRCLE). PCA *kwetekw-, *kotekw- (Ha). ||Nt kitip-; Tn kúra . . c. 'to surround'; Cht kut'iht(pa)-.

> *Note.* PCA *kwetekw-, *kotekw- is probably connected with *kwe$^{\cdot}\theta$k- (H 118) 'turn around' and also with *kweθep- (see next entry). There are also two similarly related stems in Nt, viz. kitip- and kilip-; the second is assumed to correspond to the next entry.

TURN AROUND. PCA *kweθep- (Ha). ||Nt kilip-.

TURTLE. PCEA *mexkena$^{\cdot}$hkw-a (S). Y kəɬkəh. ||At kane, kone. —The PCEA stem may have incorporated the indefinite prefix *me-; at any rate only the sequence * . . xkena$^{\cdot}$hkw- is being compared to Y and to At.

TWO. PCA *ni$^{\cdot}$š-, *ni$^{\cdot}$šwi (Bl 349). W ṛi$^{?}$t-; Y ni$^{?}$iy- 'to be two'. ||Tn $^{?}$íli.

VULVA. See COPULATE.

WAR. PCA *mi$^{\cdot}$ka$^{\cdot}$- 'fight', as in *mi$^{\cdot}$ka$^{\cdot}\theta$e$^{\cdot}$wa TA 'he fights him' (Bl 78). ||Nt $^{?}$a$^{\cdot}$NS; Tn náka; Cht nakš; At (hok)inac 'battle' (< 'fight together'). —A possible m/n correspondence is assumed; see also FISH, WINTER.

WATER. PCA *akwa$^{\cdot}$- 'from water' (Bl Lg. p. 139). Y pa$^{?}$ah. ||PG *ak^{w}ini: PM *ak^{w}i > *aku ~ *uki; Nt kuN; Tn wíši; Cht $^{?}$ak- (in compounds); At ak 'water', akon (st) 'river' (both E dial.).

WET. PCA *pat- (Ha). ||Nt pacak-; At pac 'to wash'.

WHISTLE. PCA *kwi$^{\cdot}$škwihθ- (H 120). Y k^{w}eyk^{w}eyur, k^{w}əhk^{w}əyəc-, k^{w}əyəw-. ||PM *x^{w}u$^{\cdot}$t-; Tn wúči. —All, of course, may be independent *onomatopoetic* developments.

WIDE. See COVER (1).

WINTER (ICE). PCEA *mexkwa'my-a 'ice' (S). ||PM *(u)nax^{w}a/i/u 'winter'; Cht nakt 'ice'. —A possible m/n correspondence is assumed; see also FISH, WAR.

WOMAN (WIFE). PCEA *eθkwe'w-a (S). Y w-ahpew 'his wife'. ||PM *halki/wa; Nt ʔa'ʟ.

WOOD. See TREE.

YOU. See PRONOUN (SECOND PERSON).

SOUND CORRESPONDENCES

At the present stage of the investigation it is not possible to state all of the sound correspondences between PCA and the various Gulf languages with finality. Most of the correspondences given, however, are more than likely correct. The rest are subject to later revision when more cognates can be brought together, and we can be quite certain that these will be found when more PCA reconstructions become available.[62] Some of the comparisons made are also subject to later revision. The best way to check their accuracy is to weigh them against the sound correspondences. But until plausible comparisons have been found, tentative sound correspondences cannot be worked out. And tentative sound correspondences are important clues in the search for new comparisons. This is in the very nature of the methodological procedure employed in comparative linguistics. Therefore, while most of the sound correspondences presented below are reasonably firm, some tentative ones are also shown because of their crucial importance in pointing the way in the search for new comparisons.[63]

62 We have only the first installment of a comparative Algonkian dictionary (Hockett, 1957) comprising stems in /k-/. By rough estimate this is probably no more than one-tenth of the total that can be expected.

63 Some are tentative because of a slight difficulty in PCA phonology. Bloomfield (1946) and Hockett (1957) have based their reconstructions almost entirely on Fox, Cree, Menominee, and Ojibwa, and when cognates can be found in all four languages no difficulties are encountered. On one important point, however, a serious difficulty arises in the event a Cree cognate is lacking. This involves the distinction maintained in PCA between *θ and *l. Cree has /t/ for PCA *θ and /y/ for PCA *l, but in the other three languages /n/ is the reflex for both of these PCA sounds. To add to the complication, the same three languages also have /n/ for PCA *n. This latter difficulty can be solved, however, by reference to Shawnee, Miami, Delaware, or the New England languages, all of which have /n/ for PCEA *n, but /l/ for PCEA *θ and *l. Thus among Central and Eastern languages, the crucial distinction between *θ and *l can be made only on the basis of a Cree cognate, and lacking this, the distinction cannot be made. It is true that Arapaho dialects also maintain the distinction, but the total historical phonology of these dialects has not yet been worked out; hence new phonological problems arise as soon as one tries to turn up Arapaho cognates. Some of these have been discussed by Michelson (1935).

Vowel correspondences are not included in the lists below. Before these can be worked out satisfactorily, more research is required into problems of vowel syncopation (prominent in Algonkian, but also of occasional importance in Muskogean), vowel harmony (especially in Natchez), and vowel assimilation (Tunica and Atakapa).

Sound correspondences between the Ritwan languages and the Gulf languages are likewise not given here, but those between Ritwan and PCA are treated in another paper.[64]

PCA AND PM

*p : *p *(acquire, bloom, blow, brain, cover 1, split, through, touch).* *p : *-x^{w} *(dip).* *p : *-w- *(raccoon).*

*t : *t *(cover 1, forehead, jaw, joined, spotted, tree).* *t : *c *(deer).* *t : *č *(acquire).*

*k : *k *(bloom, crawfish, cut, dip, dwell, land, negative, plural, scrape, shake, spotted, talk).* *k : *k^{w} *(bone, hand;* and in *forehead,* PM *k and *k^{w} may have been metathesized).* *k : *x^{w} *(sharp, skin v.).* —Clusters ending in *k are shown in the last paragraph of this section.

*kw : *k^{w} *(neck, swallow, water).* *kw : *x^{w} *(spit, whistle).*

Stem final *-kw : *-i/u *(deer, fish, skunk, squirrel, tree).* —This correspondence is of unusual interest and importance but the details require special treatment in a separate paper.

*m : *m *(drink, eat, give, possessed theme).* *m : *n *(land).* *m : *ɴ *(fish, winter).* PM *ɴ is explained immediately below.

*n : *n *(bone, pronoun 1, shake).* *n : *ɴ (> n in Ch, but ɬ in Al, K, H, Mik, Cr) *(fish, squirrel).* *n : *l *(die, drink, pronoun 1, sharp, stone, swallow).* *nt : *l *(brain, crow).*

*l : *l *(dig).* *l : *n *(neck 2).*

*θ : *c *(tail).* *θ-k- : *ɬ *(split).*

*s : *s *(raccoon).* *s : *t *(spit, stone, touch).*

*š : *s *(crawfish).* *š : *ɬ *(skin v., through).*

*w : *w *(dig, dwell).* *w : *p *(eat).*

Clusters ending *k. *θk : *x^{w}k^{w} ~ *x^{w} *(bone).* *θk : *lk^{w} *(hand).* *θkw : *lk *(woman).* *sk : *kk^{w} *(neck 2).* *šk : *s *(scrape).* *šk : *s ~ *sk *(hair).* *šk : č *(cut).* *xk : * kx^{w} ~ *k^{w}x *(jaw).* *xkw : *x^{w} *(winter).* *xk : *-hak- *(land).* —

We further find that among the available PCA reconstructions *θ is relatively rare. This together with the occasional uncertainty as to whether *θ or *l should be reconstructed means that it has not always been possible to determine the normal sound correspondence in a given Gulf language for these two PCA sounds.

64 Haas, 1958a, sections 5 and 6.

This apparently confused picture should not look particularly strange to an Algonkianist.[65] We now have new problems relating to clusters which have to be solved on a deeper level.

PCA AND NATCHEZ

*p : p *(acquire, beat, blow, cover 1, cover 2, dust, look, shoot 1, split, stink 1, touch, wet)*. *p : -w- *(dip, night, sleep)*.

*t : t *(brain, close eyes, cold, cover 1, cover 2, dry, forehead, leg, negative, night, one, open, turn 1)*. *t : *c *(acquire, deer, spotted, stink 1, tree, wet)*.

*k : k *(beat, black, cold, cover 2, cut, day, dip, dry, forehead, hot, in, negative, scrape, skin n., snow, spotted)*. *k : k^{w} *(bone, hide v.)*. *k : ʔ *(day, leg)*. *k : p *(plural, pronoun 2, sharp)*. *k : c *(skunk)*. *k : w *(talk)*.

*kw : k^{w}, k/u *(fear, neck, swallow, water)*. *kw : k *(turn, turn around)*. *kw : w *(one)*.

*m : m *(beaver, bee, defecate, smell)*. *m : n, N *(war)*. *m(p), *m(w) : n *(brain, shoot 1)*.

*n : n, N *(fish, name, pronoun 1, sleep, swallow, three)*. *n : l, L *(bone, extract liquid, see, sharp)*.

*l : l *(breathe, shoot 2, skin n., think)*.

*θ : s *(tail)*. *θ, *θ-k- : l, L *(fear, split, talk, turn around)*.

*s, *š : s *(day, defecate, hot, skunk)*. *s, *š : c *(cry, extract liquid, spit)*.

*w : w, W *(open)*.

*y : y *(hide v.)*.

Clusters ending in *k. *θk : l, L *(woman)*. *θk : t *(beaver)*. *sk : s *(dry)*. *sk, *šk : c *(close eyes, cut, red, scrape)*.

PCA AND TUNICA

*p : p *(acquire, beat, copulate, cover 2, die, foam, look, sleep, split, stink 1, tapering at base, through, true)*. *p : -w- *(night, swing)*.

*t : l *(acquire, close eyes, cold, ear, mouth, night, true)*. *nt : l *(crow)*. *t : r *(spotted, tree, turn 1)*. *ʔt : ht *(foam)*. *t : č, hč *(stink 1, ten)*.

*k : k *(beat, black, cedar, cold, cover 2, cut, dwell, grease, hand, in, otter, scrape, sharp, skunk, spotted, war)*. *k : w *(hide v., pronoun 2, water, whistle)*. —For clusters ending in *k, see the last paragraph of this section.

65 PCA consonant clusters have been the subject of much discussion (Bloomfield, 1925; Geary, 1941; Michelson, 1939; Siebert, 1941; Voegelin, 1941). All show varied reflexes in the several PCA and PCEA languages, e.g. *sk, F /hk/, C /sk/, M /hk/, O /kk/, Penobscot /hk/, Natick /hk/, D /hVk/, Powhatan /sk/ (Siebert, 1941, p. 298). Bloomfield first devised a set of workable formulae (1925). However, a few words still remain which contain clusters that do not fit any of these formulae (Bloomfield, 1946, p. 89).

*kw : k/u, ɔ *(son, swallow, tree, turn 1)*. *kw : w *(water, whistle)*.

*m : m *(defecate, drink, full, grease, ten)*. *m : n *(fish, war)*.

*n : n *(fish, otter, pronoun 1, three)*. *n : l *(die, two)*. *n : r *(copulate, drink, extract liquid, see, sharp, sleep, swallow)*.

*l : l *(breathe)*. *l : r *(dig, swallow, think)*.

*θ : s *(dog, father, head 1, split, tail)*. *ʔθ : ht, t *(brother;* perhaps also *big)*.

*θ or *l : s *(swing)*. *θ or *l : l *(tapering at base)*. —Here the difficulty is in the PCA reconstruction. If *swing* turns out to have PCA *θ, and *tapering at base* PCA *l, these Tunica correspondences can be fitted in in their proper places above.

*s : š *(raccoon)*. *s : č *(extract liquid, spit)*.

*š : š *(cedar, skunk, through)*.

*w : w *(dig, ear, sound v.)*.

*wV : ʔu *(dwell, pronoun 3)*. Initial position only.

*ɸe : yi *(raccoon)*. Initial position only.

Clusters ending in *k . *sk : hč *(close eyes)*. *šk : č, hč *(cut, whistle)*. *šk : s *(scrape)*. *šk : l *(full;* perhaps *red)*. *šk : šk *(foot)*.

Tunica is the only Gulf language which has an /r/ phoneme. Each PCA consonant that has Tunica /l/ as a correspondence also has Tunica /r/ as another correspondence, e.g. *t : l and *t : r; *n : l and *n : r; *l : l and *l : r. The Ritwan languages have /l/ ~ /r/ in frequent alternation for purposes of augmentative and diminutive symbolism.[66] Can it be that Tunica has preserved reflexes of such symbolism? A definite answer must await further research.

PCA and Chitimacha

*p : p, p' *(acquire, blow, die, night, shoot 1, split)*.

*t : t, t' *(forehead, night, spotted, turn 1)*. *t : č' *(acquire, cold)*. *ʔt : š *(tree)*.

*k, *kw : k, k' *(black, cold, forehead, hide v., in, neck, negative, one, scrape, spotted, turn, war, water, winter)*.

*m : m *(bee, grease, shoot 1)*. *m : n *(land, war, winter)*.

*n : n, ŋ *(die, fish, in, name, one)*. *n : c, č *(see, sharp, swallow, tail)*.

*θ-k- : š *(split*—if metathesis is assumed).

Consonant clusters ending in *k. *θk : t' *(black)*. *šk : tk *(scrape)*.

The above list is defective in several respects. No Chitimacha correspondences for PCA *l and *s have been found; only one possible one for *θ is shown; none occur for *š except in a consonant cluster. It is hoped that further research will clarify these points.

66 Haas, 1958a, section 5.1.

PCA AND ATAKAPA

*p : p *(beat, blow, cure, die, dip, far, male, shoot 1, split, through, wet)*.

*t : t *(daughter, leg, night, spotted)*. *t : c *(wet;* perhaps also *forehead)*.

*k, *kw : k *(beat, cedar, cut, day, dip, hand 1, in, leg, neck 1, one, scrape, sharp, skunk, spotted, swallow, turtle, water)*. *k : w *(talk)*.

*m : m *(bee, big, drink, give, matter, road, shoot 1, smell)*. *m : n *(land, war)*. *m : p *(full, red)*.

*n : n, ŋ *(daughter, fish, hand 1, name, one, see, sharp, turtle)*. *n : l *(drink, swallow, three)*.

*l : l *(far, matter)*.

*θ : n *(talk)*. *θ or *l : n *(cure)*. *θ-k- : ɬ *(split)*. *ʔθ or *ʔš : c *(big)*. *ʔθ : t *(three)*.

*s : š *(defecate)*.

*š : š *(cedar, head 1, skunk)*. *š : l, ɬ *(day, through)*.

Clusters ending in *k. *sk : šk *(red)*. *šk : c *(cut)*. *šk : k *(full)*.

CONCLUDING REMARKS

The material assembled in the present paper has been above all an exercise in remote comparison. PCA reconstructions carry us back in time some two or three millenia. PM reconstructions carry us back at least as far. The comparison and demonstration of genetic affiliation between two such proto-languages may well carry us back still another two or three millenia; in other words, to a total time depth of some 5000 or 6000 years. Whether or not the additional inclusion of Ritwan with Algonkian and of the other Gulf languages with Muskogean carries us back much, if any, further than this is, however, not immediately ascertainable.

There was a time when many reputable scholars maintained that remote comparisons among American Indian languages would remain forever impossible. They based their arguments on the fact that the high development of Indo-European comparative linguistics had largely been made possible by the use of actual written records of such ancient languages as Latin, Greek, and above all, Sanskrit. It is easy to demonstrate the validity of this statement as far as it goes. The error in reasoning lay in the fact that these scholars went one step farther and maintained that such development could *only* have been made possible by the use of such early written records. This latter part of the argument is quite patently wrong. Proto-Romance can be reconstructed; Proto-Germanic can be reconstructed; Proto-Slavic can be reconstructed; and Proto-Indo-Iranian can be reconstructed — and all this can be done (and some has been done) by making

use of no other materials than those found in modern spoken languages of Europe and India. The important point about Indo-European studies is that Indo-European scholars are not handicapped by having only the materials that can be deduced in this manner. After all they do have their written records and it is quite proper that they should use them. The other materials are frankly supplemental.

The story with respect to American Indian languages, however, is quite the opposite. We do not have and never will have written records of ancient Algonkian, Muskogean, Siouan, and the like. We have no choice but first to compare and make reconstructions based on closely related daughter languages. Proto-languages arrived at by this means can then serve us almost as well as Latin, Greek, and Sanskrit have served our Indo-European colleagues. We could even use a special terminology to describe different ranks of proto-languages. Proto-languages of the first order would be those reconstructed out of materials from actual languages. Proto-languages of the second order would be those reconstructed on the basis of two or more proto-languages of the first order. Some crossing of ranks would be inevitable, as when actual languages are compared with proto-languages of the first or second order, but the distinction is still a useful one to maintain. Proto-Indo-European can be considered a proto-language of the first order, because it could be reconstructed on the basis of written records of ancient languages. If, on the other hand, it had been necessary to reconstruct Proto-Indo-European out of Proto-Romance, Proto-Germanic, Proto-Slavic, etc. (all themselves proto-languages of the first order), it would be necessary to rank Proto-Indo-European as a proto-language of the second order.

It cannot be too strongly stressed that it is imperative for us to push ahead in all branches of American Indian comparative linguistics. It is particularly urgent that we give due attention to the importance of reconstructing proto-languages of the first order. Many nonlinguistic anthropologists (and even some linguistic ones) tend to overlook entirely the tremendous importance of work directed to such ends. Once it has been shown that Creek is a Muskogean language, for instance, they feel that that is the end of it. Why waste time reconstructing a Proto-Muskogean when the need for information about more remote affiliations is so great! But no Indo-Europeanist would use French in preference to Latin, or Bengali in preference to Sanskrit, for the purpose of solving the problems of remoter relationships within Indo-European. And American Indian comparativists likewise have no desire to make use of similarly inadequate materials for their purposes in any situation where proto-languages of the first order, though lacking, could be made available.

The present paper has made use of two proto-languages of the first order and has further compared them with actual languages. Any sister languages that may

have been close to Natchez, Tunica, Chitimacha, or Atakapa have simply disappeared from the face of the earth without being recorded. Hence no proto-languages of the first order can be reconstructed for any of these single-language families. But the fact that two proto-languages of the first order could be drawn into the study alongside of them has been the truly decisive factor in demonstrating (convincingly, it is hoped) that there is a genetic affiliation between Algonkian and the Gulf languages.

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ARCHAEOLOGICAL PERSPECTIVE ON ALGONKIAN-GULF LINGUISTIC RELATIONSHIPS*

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INTRODUCTION

A GENETIC RELATIONSHIP of a fundamental nature has been proposed between Algonkian languages and those of a Greater Muskogean or Gulf family (see Haas, this issue). This relationship, as I understand it, indicates a connection more recent and more intimate than those previously suggested between Muskogean and the other supposed component families of the Hokan-Siouan phylum, such as Siouan, Iroquian, or Caddoan. If this proposal of Algonkian-Gulf affinities is accepted it means a major redrawing of the linguistic map of eastern North America. The pattern would be no longer that of a northern and eastern Algonkian front impinging upon a southern and western Hokan-Siouan block; instead, the whole Woodlands of the East would now constitute a solid expanse of Algonkian-Gulf languages, dotted only by Iroquois, Cherokee, Uiche, and other minor enclaves. This rearrangement raises a number of questions for anthropological and archaeological consideration.

One of the first of these queries prompted by the linguistic realignments is whether or not a basic unity of prehistoric cultures exists in the Eastern Woodlands that might accord with an ancient Algonkian-Gulf language family. If so, what are the estimated ages? Deriving from these questions are others concerning continuities and replacements of peoples, languages, and cultures, with particular reference to the relationships between Algonkian-Gulf and Hokan-Siouan groups.

In addressing myself to the archaeological perspectives of these questions, let me make clear that there has been no established dogma in Eastern United States archaeology concerning linguistic-archaeological identifications on a major scale. Consequently, the recent findings on Algonkian and Gulf affinities do not necessitate the abandoning of deeply cherished opinions. Eastern archaeologists have pursued the matter of prehistoric culture and language correlations upon the relatively safe ground of historic site documentation as this pertains to specific tribes and archaeological complexes. Such studies, while giving some clues toward generalizations, have also emphasized the well-known dictum that there are no easy one-to-one correlations of archaeological and linguistic data. For gross language-archaeological culture relationships the best we can hope for is reasonable probabil-

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ity. The archaeological reconstructive methodology in this regard seems to me to be simplicity itself. We must rely upon geographic-cultural-linguistic concurrences, upon what might be called "massive" cultural continuity through time, upon an evaluation of culture change in archaeological sequences by such concepts as "site unit intrusion" and "trait unit intrusion," and upon the pertinent data of physical anthropology. Clearly related to all of this are coördinated archaeological-linguistic reconstructions, aided by glottochronological dating, whereby vocabularies of hypothetical "proto" languages are compared against archaeological inventories adjudged to be of the same approximate age.

With the foregoing considerations in mind, I offer the following historical generalizations and speculations about the associations of language groups and prehistoric cultures in eastern North America.

I

In our search for a prehistoric culture setting for a Proto-Algonkian-Gulf language we will turn first to the most ancient cultures of the East, the Lithic and the Archaic.

The earliest inhabitants of whom we have record in the area were the Lithic or Paleo-Indian Stage hunters whose chipped stone industries show affiliation to those of the Clovis-Folsom tradition of the Plains and the West and whose most diagnostic artifact type is the fluted projectile point.[1] The Lithic remains are difficult to date in the East. In some regions they may be older than 9000 BC; in others they may have lasted as late as 5000 BC.[2] Their presence over virtually all of the Eastern United States suggests a cultural homogeneity insofar as this can be measured from technology and environmental-cultural adjustment. Beyond this it must be admitted that cultural variability, and language, may have been great. That the Lithic era people may have spoken a single language, and that this language may have been Proto-Algonkian-Gulf, is a possibility; but that is about all that can be said about it.

II

We know that between 9000 and 5000 BC the Clovis-Folsom projectile point tradition began to be replaced by new industries that are revealed in such places in the East as the Modoc Shelter site in Illinois,[3] and the Graham Cave cite in Missouri.[4] These new projectile point forms pertain to the Archaic cultures, and shortly after 5000 BC the Archaic culture pattern of the East becomes reasonably

1 Willey and Phillips, 1958, pp. 79-103.
2 Ritchie, 1957.
3 Fowler and Winters, 1956; Libby, 1954b, C-904, 905, 907, 908.
4 Logan, 1952; Chapman, 1952; Crane, 1956, M-130, 131, 132.

well set. Although there are some evidences of transition between Lithic and Archaic cultures, the changes and innovations are numerous enough to suggest strongly new populations migrating into the Eastern area. The Archaic pattern was one adapted to hunting-fishing-gathering, and Archaic sites frequently indicate a more sedentary life than that of Lithic times.[5] Plant domestication may have been practiced, but there is no clue that it had become of prime economic importance. A number of large-bladed and stemmed projectile points and polished stone tools, ornaments, and problematical objects characterize Archaic assemblages. There is a substantial cultural uniformity throughout the East on the Archaic level, but there are also significant regional differences in artifact types. The most striking of these differences are seen between Northeastern and Southeastern groups.

From an archaeological viewpoint I believe that the Archaic cultures of the East provide a reasonable correlate for the proposed Proto-Algonkian-Gulf language stock. They have long continuity in the entire area — from 5000 BC to 2500 BC, or even later, depending upon the region; and they present a fair degree of uniformity in all parts of the area. Differences, particularly those between Northeast and Southeast, may presage the language split that eventuated between Algonkian and the Muskogean-Gulf families.

III

As early as 2500 BC a grit-tempered cord-marked pottery, reminiscent of north European and north Asiatic types, made its appearance in the Point Peninsula I phase of New York.[6] This pottery, assimilated into a resident Archaic culture base, marks the beginnings of the Early Woodland period in the northeastern United States; and cord-marked, dentate-stamped, and rocker-stamped potteries characterize Early and Middle Woodland cultures after this for many centuries. In the Southeast pottery is also added to Archaic cultures, but here it is in the form of fibre-tempered ware believed to have been developed locally as a result of stimulus diffusion from the Northeastern Woodland phases.[7] In Georgia this fibre-tempered pottery is dated by radiocarbon as early as 1700 BC.[8] This divergence between north and south in the matter of pottery is, perhaps, no more important than other artifactual differences between the two areas that existed from Archaic times; but it may be used to serve as a useful signpost to mark the approximate point in time when Northeastern and Southeastern Woodland cul-

5 Willey and Phillips, 1958, pp. 104-120. For earlier and more detailed summaries see Ford and Willey, 1941; Griffin, 1946, 1952; Fairbanks, 1949.

6 Ritchie, 1955, p. 66.

7 Griffin, 1952.

8 Crane, 1956, M-39.

tures come into being. It might be further suggested, on these grounds, that Algonkian and Gulf linguistic differentiation was firmly established by about 2500 BC.

IV

About 1500 years after the first introduction of pottery in the Northeast another significant innovation occurs in the cultural sequences of the East. This is the appearance of the first burial mounds with their attendant mortuary complexes. These early mounds are best known from the Adena culture of Ohio, Kentucky, and West Virginia, and they would appear to date as early as 800 BC.[9] The subsequent and closely related Hopewellian cultures of Ohio and Illinois are slightly later, overlapping with Adena and falling in the last half-millenium BC.[10] The origins of the Adena-Hopewell cultures and the Burial Mound tradition have been much debated, with, I believe, majority opinion favoring a northern locus — either independent native North American or by Asiatic stimulus. Certainly, the pottery of Adena-Hopewell is most easily derived from the Early Woodland pottery to which we have referred; and the mortuary ideas of cremation and offertory caches may, as Ritchie[11] has suggested, also come from the Woodland cultures of the Northeast. But the burial mound and earthwork construction traits have no pre-Adena prototypes in northern North America, and, in my opinion, the possibility still exists that the burial mound trait is of southern origin. The great mounds and earthworks of Poverty Point, Louisiana suggest this. These mounds date, by radiocarbon, from 1300 to 200 BC, with the dates clustering at 800 BC.[12] The function of the big Poverty Point mounds is unclear, and they cannot be said to offer a definitive prototype for Adena burial mounds; yet this evidence, taken in conjunction with the total setting of the Adena culture, cannot be ignored.

As Spaulding[13] has pointed out, the total configuration of Adena culture as seen against the backdrop of the old Archaic-Woodland cultures of the East is startlingly different and reminiscent of Middle America. Maize agriculture appears to have entered the eastern Woodlands at this time. A maize find has been reported by Ritchie[14] from a contemporaneous New York culture, dated at about 1000 BC; and there is substantial direct evidence for maize in the succeeding Hopewellian phases. The elaborate log-crypt tombs, the implications of social differentiation, the use of the celt to the exclusion of the Archaic grooved axe, textiles, and elabo-

9 Libby, 1954a, C-759; Libby, 1954b, C-942.

10 Crane, 1956, M-15; Arnold and Libby, 1951, C-152; Willey and Phillips, 1958, pp. 156-158.

11 Ritchie, 1955.

12 Ford and Webb, 1956.

13 Spaulding, 1952.

14 Ritchie, 1951.

rately carved stone tablets make up a constellation of new traits for the area. These, taken together with a broad-headed physical type, on which either occipital or bi-frontal flattening had been sometimes practiced, constitute a case for a new, invading population, most likely entering from the south.

Whatever the origins of the burial mound idea it became a centralizing force in many Eastern native cultures, apparently spreading from the Ohio valley between 500 BC and 500 AD. In line with the above arguments that a new population was involved, the suggestion is made that the burial mound tradition was brought into the East, from the south, by peoples of Hokan-Siouan affiliation, possibly the Iroquoians.

V

At sometime after the climax of the Adena-Hopewell cultures, possibly as early as 500 AD or as late as 1000 AD, profound changes are noted in the archaeology of the East. These changes are reflected in the establishment of a town way of life, of the full dominance of maize agriculture in the economy, of numerous ceramic and artifact innovations, and of the construction of flat-topped pyramidal mounds of earth which were used as the bases for temples or chief's houses.[15] These cultures of the Temple Mound tradition reveal certain contact with Middle America. There are at least three important regional cultural continuities within the Temple Mound tradition: one centers in the lower Mississippi valley in the Coles Creek-Plaquemine-Natchez continuum; another appears to have its hearth in the Louisiana-Texas-Arkansas region of the Red River where it is identified in the Gibson-Fulton continuum leading into historic Southern Caddoan culture; and the third, and most influential, the Mississippian, probably focused in the heart of the Mississippi valley, to north and south of the mouth of the Ohio. From this last region Early Mississippian culture spread fanwise. To the east and south it penetrated deep into Tennessee, Alabama, and Georgia. Some Mississippian sites, such as the one at Macon, Georgia, appear as isolated "site unit intrusions" into regions otherwise dominated by old local cultures.[16] Then, in a later period new cultures arose in these invaded regions, representing a blend of local and intrusive traits.

If the Temple Mound traditions were borne by an invasion of new peoples into the Mississippi valley and surrounding regions the most likely linguistic affiliation of the newcomers would be Hokan-Siouan, probably Siouan and Caddoan. Throughout much of the Southeast Muskogean was spoken in early historic

15 Willey and Phillips, 1958, pp. 163-168. For earlier and more detailed summaries see Ford and Willey, 1941; Griffin, 1946, 1952; Fairbanks, 1949.

16 Willey, et al., 1956.

times, and Muskogean or other Gulf languages were probably the principal tongues in the area in the late prehistoric period. The disappearance of the language of the invaders in many regions is not especially surprising. A comparable case is suggested by the Toltec invasion of Yucatan in the 10th century and their establishment of Chichen Itza as an important site deep in the heart of Puuc Maya territory.[17] In the succeeding fusion of Mexicanized Maya culture, as represented by the site of Mayapan, Maya must have been the prevalent language. At least when the Spaniards entered the country a short time afterward, Maya was the only speech reported in the peninsula. The "islands" of Siouan, found east of the Mississippi River in historic times, such as Catawba, Biloxi, and, probably, Uiche, may be the descendants of peoples who pushed their way into the Southeast at the time of the expansion of the Mississippian cultures.

SUMMARY

A Proto-Algonkian-Gulf linguistic unity may correlate with the Archaic cultures of the Eastern United States which at one time covered the entire Northeastern and Southeastern areas. This Archaic culture began to emerge at the close of Lithic or Paleo-Indian times, as early as 9000 to 7000 BC, and by 5000 BC it had assumed its characteristic form. Differences between Archaic cultures of the Northeast and the Southeast, especially in the Early Woodland cord-marked pottery of the north and the fibre-tempered pottery of the south, are noteworthy by 2500 to 1500 BC; and the suggestion is made that Algonkian-Gulf divergence had taken place by this time. At about 1000 BC the Burial Mound Tradition appeared in the Ohio-Kentucky region in the Adena culture. Certain features of Adena, such as pottery, cremation, and caches of grave furniture, probably have a northern Woodland origin. The mounds themselves may also be northern; however, the presence of large artificial mounds and earthworks in the lower Mississippi valley as early as, or earlier than, 1000 BC, together with the concommitant appearance of maize, various culture traits, and a brachycephalic physical type in Adena, raises the question of Middle American origin and of the probable entrance of new populations into the East at this time. It is suggested that Hokan-Siouan speaking groups, possibly Iroquoians, may have been involved. The later changes brought about in the East by the Temple Mound Tradition and related traits point even more definitely to Middle America. These seem to have entered the Mississippi valley between 500 and 1000 AD. Again, Hokan-Siouan language families may have been the bearers. Although the Temple Mound Tradition and Mississippian culture penetrated through the East, especially the Southeast, with vigor,

17 *Ibid.*

it blended with or was absorbed by older local cultures of Woodland traditions. If Siouan populations were involved in these cultural invasions of the Southeast their language did not prevail except in certain isolated regions. At the time of the first European explorations most of the Southeast was held by peoples who spoke languages of the Gulf stock.

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A "CARGO" SITUATION IN THE MARKHAM VALLEY, NEW GUINEA

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I

CARGO CULTS in New Guinea have been attracting scientific interest for approximately thirty-six years. It is generally accepted that the movements express tensions which are extremely widespread in New Guinea society. They are a reaction to the social changes which are occurring everywhere as the result of European penetration. Their origin lies in racial tensions, in the disenchantment and frustration of a people whose hopes for social and economic betterment outstrip their command of the practical knowledge and technical means to achieve their ends; and they point towards the creation of a new social and economic order based on the inversion of the present form of Black-White relationships.[1]

With the extensive information which is available on the movements, it sometimes seems gratuitous to record each minor manifestation. We are familiar with the symbolism of "cargo." The content of the beliefs and the associated practices vary only slightly within a fairly well-established context, and description in itself does not advance our knowledge much farther. There is, however, a need to study "cargo" as a social process. Field-workers should be sent, if possible, to areas where there is on-going cult activity, for our knowledge is least satisfactory where the social and psychological dynamics of the movements are concerned, and it is virtually impossible to obtain the necessary data from retrospective accounts.

The present paper records an incipient — or perhaps abortive — cult which occurred during my stay in 1945 in the Ngarawapum villages in the upper Markham Valley. I do not claim that it adds very much to what we already know. Indeed, any conclusions we might draw from it are primarily of a negative character. But the question of why the situation did not crystallize is one which has considerable significance.[2]

II

The term "cargo" has been used rather loosely at times to refer to phenomena which are not the same. Given some precision, it designates those movements which center around a belief in the imminent creation of a "new order" by means of

1 The most recent exposition of this view will be found in *The Trumpet Shall Sound: a Study of "Cargo" Cults in Melanesia*, by Peter Worsley (MacGibbon and Kee: London, 1957).

2 Additional material on the Ngarawapum will be found in my papers *Social Organization in the Markham Valley* (Oceania, vol. 17, 1946); *The Effects of the Pacific War in the Markham Valley* (Oceania, vol. 18, 1948); *The Political System of the Ngarawapum* (Oceania, vol. 20, 1950).

supernatural intervention in the affairs of men. Among other things, the new order includes the delivery of the material wealth of the Europeans into native hands and the end of White domination. The criteria of imminence and supernatural deliverance distinguish the "cargo" complex from movements which seek to establish a new order through secular forms of organization. In each case the ends are much the same, and the secular movement may include supernatural elements; but it lacks the apocalyptic character of the "cargo" cult. In other instances, it is the content of the beliefs which serves to identify the "cargo" movement. Apocalyptic cults of a different kind have been reported in New Guinea, and it is likely that they occur more frequently — and are more widespread — than our present information suggests. But though they center round some imminent supernatural intervention in the existing order, the envisaged events do not include the expulsion of the Whites and the acquisition of their material wealth. Yet in such instances elements of the "cargo" may appear in an incipient form.

An adequate understanding of the "cargo" demands that we see it in relation to these other movements. For example, early observers tended to be most impressed by the "borrowed" elements in the "cargo" cults, by the figures and ideas taken over from the Bible and from Christian eschatology and by the practices modelled on European customs. Certainly these elements are important; but they should not be allowed to obscure the Melanesian character of the cults. Melanesian religious beliefs often include apocalyptic ideas, and recent writers have pointed to other relationships between the cult beliefs and the indigenous religion. Both Lawrence and Worsley have drawn attention to the materialism of Melanesian religious thought, to the concern with the supernatural (whether ancestral spirits or anthropomorphic deities) as the source of material wealth and worldly success rather than eternal salvation.[3] The "cargo" beliefs represent a reworking of this cultural tradition to accommodate inferences drawn from a partial acquaintance with European culture. Again, possession is a common phenomenon in Melanesia, a culturally accepted way in which supernatural forces become manifest to the living; and dreams are considered to be the means chosen by the spirits to give advice and guidance. So the Ngarawapum hopes he may dream that he has killed a wild pig. He interprets the dream as a visitation from his ancestral spirit who counsels him to organize a hunting party and promises him success.

That the "cargo" expresses traditional religious thought is hardly a new or unexpected discovery. But it needs stating. For the traditional beliefs are important

3 *Vide* Peter Lawrence, *Cargo Cult and Religious Beliefs among the Garia* (International Archives of Anthropology, vol. 47, 1954), and Peter Worsley, *The Trumpet Shall Sound* (*op. cit.*) pp. 239 ff.

elements in the social and ideological climate which produces the cults, and they help to explain the readiness with which groups accept and act upon the revelations of the prophets. The rapid spread of the movements, once they crystallize, is in fact an indication of the common understandings which exist in an area of great cultural diversity. I mention this, however, because I wish to emphasize that where they occur the movements are not responses to unique conditions. If our interpretation of the factors underlying cult activity is valid, then we might say that "cargo" is part of the atmosphere of native New Guinea. Indeed, it does not require a great deal of imagination to "sense" this atmosphere, for many a glance, queries, the phrasing of ideas, and proffered explanations remind the field-worker of the presence of "cargo" beliefs. This was clearly the case in the Ngarawapum villages in 1945.

Ngarawapum culture has many of the characteristics which we expect to find in Melanesia. The people live in five politically autonomous villages which are linked to one another through intermarriage, ceremonial exchange and economic coöperation. They speak of the territory surrounding the villages as "the earth of Ngarawapum"; its boundaries are known and its inhabitants regard most of the neighboring populations as enemies. Each village contains a number of small, unnamed patrilineal clans. Neither the clan nor any of the larger local groups possess a machinery which we might readily identify with the term government. Ngarawapum is a "stateless" society.

Within each village, control is exercised by "big men" (*garam tzira*), who are the elders of each clan. But although seniority is important, not every clan elder is a "big man." In the past the "big man" was a noted warrior. He knew the secret names of the ancestral spirits and he was knowledgeable in sorcery and magic. He is also a man of considerable wealth, which he uses to build up a following in his village. His wealth enables him to contribute lavishly to marriage and mortuary payments; it places others under a binding obligation to him. In particular, the wealthy man earns prestige from the part he plays in the major ritual, the *mugus* festivals. These are competitive exchanges of pigs and garden produce which occur at the harvest of the village yam gardens. A young man with the necessary resources is able to assume a conspicuous role in these activities. He is the kind of person whom the *garam tzira* watch with approval, whom they are likely to select as best qualified to carry on their specialized knowledge.

Pigs and garden produce are the material basis of the Ngarawapum way of life and are the focus of abiding interest and ambition. The people produce a great deal more than their subsistence needs require, for the ceremonial exchange of food is a necessary expression of most social relationships. The state of a man's

crops are an indication of his virtue and his social standing. The quality of his produce is a matter for pride or envy, and the sight of vast quantities of foodstuffs is a source of deep emotional satisfaction. Indeed, people rejoice in the smell of rotting food and in eating until they vomit. They identify so closely with the source of their prosperity that in illness they often ask to be carried to their gardens, feeling that the sight of their crops might make them well.

But if the state of the gardens testifies to man's skill and industry, it exemplifies, above all, human dependence on supernatural forces. The Ngarawapum possess a legacy of technical knowledge which each man applies to the best of his ability. They realize that the best results cannot be obtained from shoddy work; but even if men perform their technical tasks with the utmost care — if they follow every rule of husbandry — supernatural aid is also necessary. Malinowski's view that primitive people make a clear distinction between the empirical and the magical elements in a process of production does not apply to the Ngarawapum. Rather, I would say that ritual practices — designed to enlist the aid of supernatural forces — are regarded as part of the technical process. The ritual may not be effective without the application of empirically derived skills; but neither is human skill effective without the application of ritual. In the last analysis, ritual is the more important element, for it bridges the gap between possible failure and success.

So to the Ngarawapum material prosperity is the gift of the ancestral spirits (*urumang*). These spirits are believed to have the same interests and to engage in the same activities as their living descendants. They also like to visit the houses of the living, who place small offerings of food for them in the rafters. The spirits provide advice through dream experience, and at times they may enter into a living person and take possession of him. When such a person is possessed he quivers and shakes in a characteristic manner, races wildly about the village and has to be restrained and subdued by force. All material things are under the control of the spirits. The wild pigs belong to them. They can cause disaster — by sending insect pests to destroy the crops — and they can ensure success. They make all things grow, and they have a particularly close association with yams, which of all foods signify prosperity to the Ngarawapum. People refer to yams as "our ancestors." When they plant the tubers they exhort the spirits to accompany them into the soil. They address the yams as though they were the ancestors, and at harvest they again treat the produce as a material manifestation of their supernatural protectors. They carry the tubers in a formal procession to the villages, wash them with warm water, sprinkle them with blood, and offer them a sacrifice of pigs. Whether a man is hunting, gardening, fishing a stream or raiding his enemies, the things he has and the things he achieves are his because the spirits have provided for him. Con-

sequently, men's interests are focused on the means of obtaining supernatural benefits.

In this respect there are certain things that all men can do — indeed, *must* do. They can secure supernatural assistance by offering food to the spirits and by observing the taboos which are associated with various activities — refraining from sexual intercourse prior to working in a yam garden is one example. They can also ensure prosperity by the performance of ritual. Knowledge of spells and practices to promote the growth of crops is fairly widely distributed through the population and is handed down in family lines from generation to generation. But in each village there are a number of men who are most knowledgeable in these matters. These men are responsible for the performanc of the ritual in activities which have a clan or village character, such as the magic performed prior to a raid or a hunting expedition, at the planting and the harvest of the yam gardens and throughout the *mugus* festivals. The preëminence of these specialists is associated with the belief that their ritual is more powerful than that of most men. While most ritual involves calling upon the ancestral spirits by name, the names known to the specialist have the greater efficacy. In consequence, it might be said that in order to obtain full enjoyment or possession of the things provided by the supernatural it is important to know the best approach. The spirits give most to those who know their identity.

These beliefs are similar to those which Lawrence reports among the Garia, and he has shown their significance for an understanding of the "cargo" in an area where there has been a tremendous amount of cult activity. But to complete this brief description of the ideological background, we need to look at Ngarawapum-European relationships and the kind of attitudes they have engendered.

III

The peoples of the Markham Valley have a "bad" reputation among European employers. To refer to a man as "a Markham" probably carries the implication that he is "no good," that he is inclined to arrogance and insubordination, a "trouble-maker" or, to use an Australian slang expression, "a bit of a lair" (meritricious). The Ngarawapum stereotypes for Europeans are equally precise.

They have had a lengthy contact with Whites, extending back to the German Administration prior to 1914. But the upper Markham Valley has not attracted European commercial interests, and the distance of the Ngarawapum villages from the coastal centers has meant that the inhabitants have had a limited experience of White culture. A Government Station — staffed by a Patrol Officer — and a Lutheran Mission are situated approximately eight miles from the settlements at

Kaiapit. While the Administration has been responsible for introducing — and enforcing — changes in native society, White officials visit the villages only about twice per year. These visits are anticipated with a great deal of trepidation by the people, and also with many humorous references to their predicament; but Government surveillance has been less intense than the watchfulness exercised by the Mission. So I shall point out later that Mission policy was extremely repressive in the period between 1918 and 1940. For the rest, most adult Ngarawapum have been employed as laborers on European plantations and on the goldfields or have been domestic servants. A few have been members of the native police force, and some have attended the training centers for Lutheran catechists.

The Ngarawapum distinguish four European "tribal" groups.[4] They refer to most members of the White population prior to 1940 as "English," a designation quite probably supplied by the Lutheran missionaries, who were German nationals. To the Ngarawapum, the English had one aim: to preserve their privileged status. The English regarded the "bilak-skins" as inferior, looked on them as "dogs," said that they smelled, and considered them fit for manual labor only. The Ngarawapum recount how they were abused and sometimes beaten by their English employers, and they are acutely aware of the many practices employed to preserve class distinctions. They also say that the English did not want to share their knowledge. The English possessed a vast material wealth and the "bilak-skins" practically nothing. If the latter also had access to this wealth, the English could not treat them as inferior animals. So the English kept their knowledge to themselves.

In addition to the English, the Ngarawapum also speak of "Germans." They do not remember much about the pre-1914 Administration, so the Lutheran missionaries are the only representatives of this group with whom they are familiar. All the adult population of Ngarawapum are baptized Christians, and before the missionaries were interned during the Second World War regular church services were held in the villages. The Kaiapit missionaries frowned on any practice remotely connected with the pagan religion and did not hesitate to use force to eradicate the things they disapproved. If they received word that a village was celebrating a *mugus* festival, they would ride hastily to the settlement, tear down the ritual objects erected in honor of the spirits, and scatter the congregation with whips. They abhorred dancing — particularly when the dance took place at night — and they tried to restrict the scale of feasting. The Mission program also included some extremely elementary schooling for the younger people; but they did not teach English and the only texts provided were religious tracts in Yabim, a Melanesian

4 I deal with these groups more fully in *The Effects of the Pacific War in the Markham Valley (op. cit.).*

language spoken by people who occupy the southeastern corner of the Huon Peninsula.

Initially the Ngarawapum seem to have been prepared to acquiesce in this kind of interference and to accept the teaching of the missionaries; but as time went by, and the benefits they expected to obtain did not arrive, their attitude changed. In 1945 they said that the Mission had lied to them. They reported the missionaries' words that "all things came from God," and they said that they knew this was untrue: if all things came from God, why did the Whites have such abundance and the "bilak-skins" so little? In their state of disenchantment, they returned to their own magico-religious practices; but they deceived the missionaries by performing these rites at night and in secret. Indeed, they practised this deception on me. Even after nine months of close association with them, many men insisted that everything connected with the indigenous religion had been "thrown away," and they engaged in many subterfuges to prevent me from witnessing their ceremonies. The situation became ridiculous when I sat in the yam gardens and watched the rites in progress while my companions told me that these things were simply not performed any more. Perhaps it is not extraordinary that when they discussed the future in 1945, the Ngarawapum hoped that neither the English nor the missionaries would return.

The third group of Whites are called "Australians" by the Ngarawapum. They include in this category all members of the Australian Military Forces with the exception of the personnel of ANGAU, the Australian military government unit. A great many of the younger men served as carriers with the armed forces during the operations which led eventually to the defeat of the Japanese. During and after the Markham Valley campaign considerable numbers of Australian soldiers passed through the villages. Like other New Guinea peoples, the Ngarawapum were deeply impressed by the sheer quantity of the material brought by the military forces, and by the freedom with which the average enlisted man disposed of it. But in addition they felt that these Australians treated them like men rather than inferior animals. Recalling their experiences, they said "we are brothers," and they recounted how they sat with the Australians, shared food with them and sheltered from air-raids in the same slit-trench. They told how the Australians gave them clothing and guarded them at night, how they were "sorry for us" and, unlike the English, "did not send us away." Some of the younger men also reported hearing Australians say that "when the war is over we will look after you and teach you everything we know."

The Ngarawapum hoped that this was true; but they were puzzled about the presence of the English — members of ANGAU — with the Australian forces.

Many members of ANGAU had lived in New Guinea prior to the war, but the Ngarawapum based their judgment of the unit on the treatment they expected to receive from its members. ANGAU was the government in New Guinea, and its representatives were responsible, among other things, for enforcing law and order. Like the pre-war Patrol Officer, they came to villages with their police, issued commands, and expected obedience. They criticized, acted in an overbearing manner, and remained apart from the local inhabitants. At first they took vengeance on anyone suspected of assisting the Japanese and later on, when the military campaign had ended in the Markham, there were a number of other shocking incidents at Kaiapit. What one member of the unit did stigmatized the other members. The Ngarawapum were convinced that these men were English.

Lastly, the Ngarawapum also knew of the "Americans." In other parts of New Guinea the natives viewed Americans as the Ngarawapum viewed Australians, and for the same reasons. But the Australian forces were numerically superior in the upper Markham, and the people of that area looked to the Australians for the new kind of life which others hoped to obtain through American assistance.

In addition to the four White groups the Ngarawapum knew of "Africans" (American Negroes) and Japanese. Some Markham people collaborated with the Japanese. In one instance, a European officer was betrayed to a Japanese patrol and was shot in the village of Ofofragen. But as the Allied offensive progressed, the Japanese alienated any goodwill which may have existed. The same story was repeated all over New Guinea. Short of food, the Japanese took what they needed from the natives, who repaid them with resentment and dislike. Elsewhere, the presence of Negroes with the American forces created a deep impression; but the Ngarawapum saw very few Africans, and the latter had little impact on native thought.

IV

We may summarize the situation in 1945 as follows. The villagers had long been resentful of White domination. Anxious to share the wealth of the Europeans and unable to achieve their ends by any of the means open to them, they concluded that the Whites deliberately withheld these means from them. From their partial acquaintance with European culture, they believed that Whites did not have to work for material goods; and since their traditional ideology held that all forms of wealth and prosperity derive from the spirits, they concluded that with knowledge of the correct ritual, of the supernatural key, they could realize their ambitions. Like many other New Guinea peoples, they probably thought that the missionaries could provide them with this key. But they were disillusioned. The

missionaries, too, withheld their knowledge. This is the situation which has seen the development of "cargo" cults throughout Melanesia. Cults did emerge in the Markham Valley between the two wars, but I cannot say to what extent the Ngarawapum became involved in them. I believe it was only to a minor extent.

Then the people saw the English and the missionaries depart. Considerable numbers of their young men also left the villages, and those who remained at home suffered some hardships. But they no longer had to consider what the English and the missionaries might do to them. The village "churches" fell into disrepair, and the indigenous ritual was brought back into the open. Later still, the Japanese came and food began to get short. Then the Australians appeared and a new era in Black-White relationships seemed to be beginning. Perhaps the future remained doubtful — the presence of ANGAU indicated this — but it did not seem as bleak as previously.

The people were still suspicious of Europeans when I arrived in Ngarawapum. On my first night they asked me how long I intended to remain; when I told them nine months, they replied that I could stay for two weeks but no longer. Later, they accepted me as an Australian and seemed pleased enough to have me. But although I was led to conclude that the general situation had improved vastly over pre-war conditions, a good deal of tension remained; and there were endless discussions of the English, of the deception practised by the missionaries, the different attitude of the Australians, and perhaps more than anything else, of the fear that the English might return to dominate them as before.

While some of the young men remained with the military forces, others had returned home and the villagers were fairly prosperous. They recognized that they had suffered less than some of their neighbors, who remained partially dependent on food supplied by the military administration. The fact that they were able to hold two *mugus* festivals during my stay indicates considerable progress towards economic recovery. Admittedly they pointed out that the number of pigs and the amount of foodstuffs assembled for these occasions represented only a fraction of what it would have been previously. But we have to remember that these festivals had not been held when the missionaries were in residence at Kaiapit. The missionaries had attempted to introduce a substitute form of ceremonial exchange featuring Christian symbols and stripped of any elements which they regarded as licentious. They also attempted to limit the amount of goods which changed hands. The Ngarawapum came to view these festivals as ludicrous, and when there was no longer any occasion to fear mission displeasure, they returned to the traditional form. The ceremonies I saw included all the pagan ritual, the rites at harvest in

the yam gardens, the sacrifice of pigs, the purification of the yams, the oblations to the spirits, and the construction of the material symbols of the ancestors. All these things were performed openly, in the gardens and in the villages, and the dancing continued through the night. Moreover, preparations for a *mugus* festival extend over a long period and absorb a great deal of energy. So many values and so much uncertainty attach to the *mugus* that people seem completely immersed in it and intolerant of anything which interferes with the preparations.

But although the Ngarawapum recognized that there had been an appreciable change for the better, they remained acutely aware of their material poverty. Indeed, the vast wealth possessed by the military forces emphasized the gulf which lay between the natives and the Whites. Together with resentment against the English, this created an atmosphere charged with speculation.

Discussing their relationships with Europeans, people remarked that "we would be the same as the White man if we knew what he knows"; and it is apparent that they did not refer to technical knowledge alone. They asked me time and again how various material objects were made; but anyone who has been confronted with this question will agree that it is virtually impossible to explain an industrial process to people who have no knowledge of industrial organization. You cannot satisfactorily explain everything that is involved in the manufacture of the steel which forms the blade of a European axe; and the description of an assembly line in the automobile factory probably sounds like an account of hundreds of men performing various parts of a ritual. Taking into consideration the vast differences in background and a partial acquaintance with European culture, the source of White power and wealth remains an unanswered question. So men also said to me "you are different because you have a King. White men have this King who gives them 'cargo.' Black men have no King."

These statements echo the beliefs of the "Black King" movement which has appeared in various parts of New Guinea.[5] After hearing such views expressed it is possible to obtain a keener appreciation of the interpretation placed on a number of European practices. The raising and lowering of the flag at Government Stations, the parade of police at Retreat became ritual acts connected in some way with the source of European power. The problem becomes one of discovering both the sources of this power and the means of establishing the appropriate relationship with it. Speculation may take many different directions, and various suggestions may be current in the same group at the same time. Indeed, I would suggest that this is characteristic of the situation which precedes the development of a "cargo"

5 Cf. Worsley, *The Trumpet Shall Sound (op. cit.)*, pp. 100-101.

cult, and I can vouch for it among the Ngarawapum. Besides those who thought that European power derived from some mystic relationship with a "King," there were others who conceived of God as the provider of wealth, but who also said that the missionaries had not "opened the right road" to God. To these people learning to read and write in English seemed vitally important. Book learning assumed the characteristics of ritual knowledge, and people constantly expressed the hope that the Australians would open schools which taught English. "Black men speak many tongues," it was said. "All have a different thinking. White men speak the same; they have one thinking. How can black men know the correct road?"

Other people were more direct in expressing the general concern with these questions. A group of men might assemble and sit watching quietly as I worked. When I paused one of them would address me by name, and as I looked up I would become aware of the questioning eyes turned in my direction. The conversation might proceed in the following way.

"You have seen that we have much land," the spokesman would say, and when I replied that this was true he would ask me, "Is it enough to build an airfield?" I would tell him the area was adequate for this and he might question me concerning the best location. Should the airfield be placed near the village, or would it be better to locate it some distance away? But these were only ways of approach to the most important question which invariably arose at some point. "Suppose we build the airfield," he would ask, "you tell us, will the 'cargo' come?"

At these times they seemed to accept whatever reply I made, and as I always told them the "cargo" would not come, they would lapse into silence and eventually leave me. But they would return on other occasions, and the same kind of conversation would take place. When it occurred, I began to feel that the important things were being left unsaid. It was as though there was some unvoiced understanding between us. The men were implying that I knew more than I admitted and that *they knew* I knew it.

I had this kind of experience many times. I would be in a garden with someone I knew and he would suddenly ask me "What makes yams grow?" Perhaps I would say something about rain, sunshine, and nourishment from the soil, and he would reply shortly "It is not so." On one occasion when I was standing in a garden with a friend, he suddenly turned towards me, looked directly at me, and indicating the hillside below us, he said: "This is where we will make our airfield. The 'cargo' will come to us, to you and me." When I denied this he made no reply; but I felt that he did not accept my denial. Rather, he seemed to imply that we both *knew*. Perhaps I did not want to say I knew, but it was no use dissembling with him.

V

Shortly before the village of Tofmora celebrated a *mugus*, I received some information which seemed to point directly to some of the classic elements of "cargo" cults. It was given to me casually by a youth who was sitting beside me one afternoon at the edge of the village street. A group of five women, led by a girl named Sipura, entered from the direction of the neighboring settlement of Maianzarian and crossed the open space in front of us. As they passed out of sight the youth remarked "Sipura says she is a Kiap" — Kiap being the neo-Melanesian term for a European Patrol Officer. I asked him what he meant, and he gave me the following story.

Sipura had told some of her female kinsmen that she had had a dream in which she had seen herself as a Kiap, marching at the head of other women who carried rifles like the native police. The women we had just seen said they were Sipura's "police boys." In the mornings they waited for Sipura's orders and then they all set out to the gardens together. They walked one behind the other and said they were riding to work in trucks. In the afternoons they "lined" for Sipura and she gave them "talk." Sometimes they each held a stick and while Sipura said "Shun!" and "Present arms!" they attempted to make the appropriate responses. Once a week they also received "pay" from Sipura. They "lined" for her and she gave each of them a number of stones which she said were "money."

The youth recounted these events without any hesitation; indeed, he seemed to make light of them. But when he finished his recital he asked, "Is this talk of Sipura true?", and he answered his own question by saying: "Perhaps she lies. Who knows?"

In the following days, I saw Sipura and her companions often. They passed my house each morning on their way to work, always walking in single file. But otherwise they seemed no different from any group of women on their way to the gardens, and no one semed to pay particular attention to them.

I questioned my informant several times. He confirmed what he had told me and added that the women were still behaving in the manner described. I asked him if he could take me where I could watch them, and one morning we went to the gardens where he expected to find Sipura. The girl and her companions were there, but they were scattered about the garden weeding like any other working party. I said I would like to speak to Sipura; but at this my companion seemed to become uncomfortable. He said that if people knew he had told me these things they would be very angry with him. Since I knew that some of the elders had told the younger people not to answer my questions, I believed him and did not talk to the girl.

Perhaps my interest in Sipura prompted the youth to tell what he knew to some of the older men. At all events, on the afternoon of the fifth day Sipura's behavior became public knowledge.

I was sitting outside my house when Furap, the elder brother of my informant, appeared before me. Greatly agitated, he demanded to know what his younger brother had told me about Sipura. I recounted what I had heard; whereupon, Furap turned aside and called to his grandfather Itzara, one of the *garam tzira* of Tofmora, whose house stood opposite mine in the village. The two of them spoke together for a moment, then walked rapidly away to the upper end of the settlement.

After a short interval they appeared again at my house, accompanied by about a dozen men and women. Furap asked me to repeat what I had told him, and as I gave my account the women, standing in the background, kept crying out "Agai! Agai!", an expression which people use when they are deeply moved. Each time they did this the men turned on them angrily and shouted at them to be quiet. Furap picked up a stick and threatened them.

When I had told my story, the men began to talk to one another. I gathered that they were disturbed, but I could not follow their conversation. Now and again Furap turned to me and advised me not to pay any attention to Sipura's behavior. He insisted that it was simply "women's play," not to be taken seriously; but I noticed that one man disappeared hurriedly in the direction of Maianzarian.

Perhaps twenty minutes passed. I knew that they had decided on their next move, and I had also heard enough of their discussion to know that they did not want me to accompany them.[6] Accordingly, I ignored Furap when he said, "You stay now, we go. Talk is finished. This is nothing." I stood up and waited. It must have been clear that I did not intend to remain. The men hesitated for a moment, then Itzara spoke to Furap. The latter turned to me and said grudgingly, "All right, you come to Maianzarian; but this is only a little thing, just something to do with women."

When we arrived at Maianzarian we sat down and waited. More people from Tofmora joined us and I noticed individuals from Gainaron as well as Maian-

6 This was a familiar experience. Frequently when I accompanied people to magical ceremonies in the gardens, a man would be detailed to prevent me from witnessing the performance. He would suggest that we sit down while the rest of the company went ahead, telling me that it would be a long time before anything happened, or suggesting that I would be better employed elsewhere. I usually humored him for a while and then told him firmly that he could remain if he liked, but that I was joining the others. However, I was unable to take notes during any of these ceremonies.

zarian. Eventually Sipura herself appeared. Evidently she had been summoned from her garden, for she was carrying a bag of vegetables. She walked to her father's house, placed the bag inside, and sat down amongst the women. There was a short pause, then one of the Maianzarian *garam tzira* stood up and asked us to say why we had called the people together. As Itzara rose and began to state his reasons, an excited buzz ran through the crowds of women. Furap jumped up and shouted at them angrily. Other men from Maianzarian joined him and the women became quiet.

From time to time the *garam tzira* of Maianzarian interrupted Itzara with questions. When he had told them all he knew, he sat down.

After a slight pause, Sipura's father stood up. Turning to his daughter, he demanded to know if the things Itzara had related were true. The girl hung her head and made some inaudible reply. A man sitting next to me remarked: "She will hide it. That is the way with women. It is all true."

Someone else from the Maianzarian group called to Sipura, but before she replied another woman broke in with some unintelligible but resentful remark. Her words provoked a storm of shouting and many of the men leaped up in a threatening manner. For a while I could not make out anything that was said. The Maianzarian and Tofmora men seemed to be engaged in angry debate. Then a few women began to wail. Immediately, the men of both parties turned on them and the confusion increased. More women joined in the stylized wailing, a sort of sobbing chant which I had heard at funerals and at other times when women were startled by ghosts. So a lone woman, sitting outside her house at night, would suddenly cry out in this manner and people would say that a spirit had "jumped" on her.

When the wailing began I felt that matters were getting out of control. Most of the men were on their feet, some shouting ineffectually; others simply watching tensely. I noticed a commotion amongst the women sitting near Sipura. One who was older than the others jumped up and ran through the throng of men, disappearing in the direction of Tofmora. The men seemed to hesitate; then Furap and several others raced after her. I had seen this sort of thing happen on previous occasions. During the obsequies for an important man — when all the inhabitants of a village gathered around the corpse to cry and dance for several nights — both men and women became possessed and raced off into the darkness. One night, when I had left the ceremonies early, I was awakened at 2 AM by a crowd of men carrying torches who demanded to know if I had seen a certain individual who was in this state of possession. They told me to remain where I was while they searched for him and brought him back to the settlement.

As Furap and his companions disappeared, the wailing seemed to falter, and at this moment a man called Wansa pushed his way through the crowd, shouting angrily. He carried a long piece of rattan cane with which he lashed at the women nearest to him. Their wails changed to a different kind of cry. Wansa stood back and launched into a long tirade.

He was a man of commanding presence, six feet tall, and although he was not old enough to be an elder, people respected him and spoke of him as a "big man." He demanded to know if the women had nothing better to do than sit about and wail. Reminding them that food was short and that many of their husbands and brothers were still absent from the villages, he said that it was not time for slacking. He pointed out that Tofmora had a great deal to do. They had said that they would hold a *mugus,* and this was a huge undertaking. Everyone had work to do. Every day there was something that required attention. At the moment nothing could be more important than the *mugus.* People must work hard all the time, and the women must listen and obey.

Apparently Wansa had found the right tone to restore order. Other men followed him, expostulating on the same theme. The excitement subsided amongst the women, and now and then a burst of laughter greeted a particularly colorful epithet used by one of the men. The gathering took on the characteristics of any other group discussion and ended with a spate of general exhortations on the benefits of hard work to ensure the success of the *mugus.*

The events of this afternoon seemed to be quickly forgotten, but I continued to question people about Sipura in the following weeks. The men who remained suspicious of me throughout my stay dismissed the matter completely. To them it had all been "play," an innocent and meaningless pastime for a number of girls. But I felt that they protested too much, and some of my best informants did not seem so sure. They inclined to the view that Sipura had said and done the things attributed to her, and they agreed that people had been very upset during the meeting at Maianzarian. When I asked them if they thought that Sipura had had this particular dream experience, they seemed to hedge a little. Perhaps she had, they said. Who can tell; and who is to know if dreams are true? I did not detect any increase in the kinds of speculations regarding the "cargo" which I have reported earlier; but speculation did not cease, although for the remaining months of my stay the people of Tofmora were almost fully occupied with the *mugus* festivals.

VI

The situation I have described possesses many of the ingredients we have learned to associate with "cargo" cults. It shows a people laboring under severe

frustrations, keenly aware of social inequalities, resentful of European domination, and disenchanted with the avenues for advancement provided by missionaries, government, and private employers. It is a picture of a people possessing only a partial view of European culture, to whom material wealth and success depend, in large measure, on command over supernatural powers, on knowledge of both the ultimate source and the most efficacious ways of securing access to it. They are a people who see the supernatural operating through many of the most ordinary events of daily life and who search for revelations in their dream experiences.

While I do not know of anyone who has been present at the precise moment of crystallization of a "cargo" movement, there are many similarities between the events which took place at Maianzarian and the descriptions which appear in the literature of cult activities. In other cases, revelations such as those attributed to Sipura have been sufficient to trigger the situation; but in this instance there seems to have been a deliberate attempt to deny them any significance. It is possible, of course — indeed, it is very likely — that a number of revelations precede the development of most "cargo" cults, that there is a sort of cumulative building-up or preparation of the cult "atmosphere." Yet on the other hand we have accounts of groups of people who dramatically manifest the typical forms of cult behavior simply on hearing reports of such activities in neighboring communities. There may be some profit, I think, if we try to isolate some of the factors which may have prevented Sipura's revelation from securing acceptance.

I believe that one of these factors may well have been my own presence in the villages. I have pointed out that the Ngarawapum did not want me to remain with them when I first arrived; and although they concluded later that I must be an "Australian," large numbers of men remained suspicious of me. I think that they were justified in their reluctance to talk to me about many of the things which they considered to be vitally important to them. Missionaries had punished them quite severely for some of their beliefs; and they must have known and seen that the government disapproved of "cargo" activities. The repressive measures adopted by the Administration have never been successful in eradicating "cargo" beliefs. They have served to stifle a particular outbreak; but they have done nothing to remedy the underlying conditions, and the movement tends to emerge, in a new form perhaps, at some subsequent time. Many Ngarawapum seriously feared the repressive actions of White officials, and they feared that information supplied to me might be passed on to the authorities. Furap's insistence that the events I witnessed had no significance does not indicate to me a lack of belief, but rather a fear of the possible consequences if the situation got out of hand. He was a young man who had received some schooling from the missionaries and who had worked in various

capacities for Europeans. He knew of the measures which the government had adopted in similar situations in other areas. He was amongst those who were most anxious to mislead me; and because of his experience he frequently spoke with authority on European attitudes and motivations. I have no doubt that he imparted these fears to others. Possibly he would have acted in the same way if I had not been there; but in any case my presence was an additional reason for extreme care.

Sipura herself supplies a second important factor. She was a woman; and the documented instances where women have played a major role in the cult organization are extremely rare. Refuting the suggestion that the cult leaders are drawn from amongst the unscrupulous or the psychologically unstable members of the society, Worsley points out that they "usually derive their authority from the indigenous order . . . or from their special knowledge or experience of the new social order of the Whites, or from new-found wealth and power."[7] It is significant that many of the leaders are former members of the Native Police or former catechists, positions which carry some prestige in the new system of relationships which includes both Whites and Blacks. Because of their special knowledge, such men tend to be regarded as "expert" interpreters of European culture, though it is abundantly clear that their interpretation is conditioned both by traditional beliefs and by their partial familiarity with the White *milieu*. I would also suggest that cult leaders possess certain qualities which may be fairly widely distributed amongst those who occupy power positions in the traditional social system. Here I am not referring to such qualities as aggressiveness, ambition, wealth, industry or some special skill which we usually cite as prerequisites for achieving power in the essentially "equalitarian" societies of New Guinea. Rather, I am suggesting that the individuals "selected" for leadership in the consensus-type society tend to be those who are most acutely aware of the tensions and inconsistencies inherent in the sociocultural tradition. Call this quality a "deeper insight," a "heightened awareness," or by any similar term, the essential point seems to be that the character of leadership in the traditional system favors a personality which experiences these tensions more keenly than others.

In Ngarawapum only men are eligible for positions of generalized authority. They also control religious symbols and activities. Some elderly women have knowledge of ritual which is thought to promote the growth of minor crops (such as sweet-potatoes); and they know spells to cause and to cure a number of ailments, to arouse sexual desire, and to secure successful deliveries in childbirth. Though men recognize the value of this knowledge, they are inclined to belittle it; and indeed it is relatively unimportant when compared with their monopoly of ritual

7 *The Trumpet Shall Sound (op. cit.)*, p. 272.

in all other areas of life. Spirits may also convey information to the living by taking possession of a woman. For example, the ghost of a deceased man sometimes "enters" a woman and causes her to point out the group responsible for his death. But characteristically, the spirits seem to use women for sport, clutching them around the shoulders or "jumping on them" when they are alone, much to the amusement of other people.

In fact, women are almost entirely dependent upon men for supernatural benefits. It is necessary to note that marriage is normally patri-virilocal. Most of the married women are recruited from outside the village in which they live, while the permanent core of each settlement is the group of men who belong there by birth. The prosperity of the community rests on the relationship between these men and the ancestral spirits: whatever the spirits do, it is done primarily to assist their agnatic descendants, and women participate in such benefits as wives and mothers. It is the men who know the names of the supernatural powers; and it is their bond of kinship with these powers which provides the means for obtaining spiritual assistance.

Clearly, this does not preclude women from undergoing religious experiences; nor does it mean that such experiences are regarded as irrelevant. Indeed, it is possible to conceive of a situation in which the religious hegemony of men encourages women to seek visions and revelations and to manifest "possession," as a means, that is, to escape their disabilities and to assert their importance. It might be argued, furthermore, that a belief which is fairly common in New Guinea might predispose people to accept such revelations. So it is widely held that the original religious discoveries were made by women and later appropriated by men. Men hope to prevent women from knowing this; they conceal the religious symbols from them and exclude them from the most important rituals. But this very jealousy of their ritual prerogatives may also lead men to discount the significance of unusual experiences in women.

From the little I know of Sipura, she did not seem to be the kind of person who would be likely to assert herself, at least to the extent of challenging the subordinate role traditionally assigned to women. At Maianzarian she seemed completely overwhelmed by the storm of emotion she had raised. She hung her head and suffered the anger of the men with the meekness considered proper in women. Perhaps it is significant that her "revelation" made no specific reference to the "cargo." It is quite clear to me that others were prepared to interpret her actions in the light of "cargo" beliefs; and considering the background material I have supplied, as well as the fact that elements of "cargo" ritual are often similar to the behavior initiated by Sipura, it does not seem surprising that they

inclined towards a supernatural explanation. But they may have been reading into Sipura's actions more than she intended. Of course we cannot be sure that it was all simply "play" to Sipura. Rather, I inclined to the opinion that the significance of her actions was not clear to the girl, and that this lack of formulation is reflected in her failure to respond with conviction.

But Wansa's speech at Maianzarian supplies us with additional reasons for the response which Sipura elicited. I hope I have made it clear that the Ngarawapum were keenly aware of the disabilities which they endured under the pre-war administration. As a result of their experiences they were carrying a considerable burden of frustration. Yet in 1945 their situation showed improvement. Understandably they had doubts about the future, and there had been no lessening of their desire to participate more fully in the material benefits of European culture. But it is also clear that they were enjoying a freedom which they had not possessed for a long time. This freedom was almost entirely due to the fact that there were no missionaries at Kaiapit. In the absence of mission interference, ceremonial life was richer than it had been for years; and I think we may conclude that this full-scale revival of pagan ceremonies provided an outlet for emotional tension and helped to engender attitudes of optimism. There was also a measure of prosperity in the villages; for although people recognized that the times were difficult, they had sufficient food to hold two *mugus* festivals.

Sipura's behavior became public knowledge when the preparations for the second of these festivals were well-advanced. Maianzarian and Gainaron had celebrated a *mugus* about six weeks previously, and the villages of Tofmora and Gutsuwap had been their principal guests. The latter were therefore laboring under a temporary eclipse. To restore parity and to recoup their prestige, they had to return the invitation and, if possible, provide the former villages with a more elaborate entertainment. Equally, Maianzarian and Gainaron were anxious for Tofmora and Gutsuwap to discharge this obligation; for as far as they were concerned it meant that they would be eating pig and gorging on other foods for at least a week.

Tofmora and Gutsuwap had already felt the sting of boasting from the other settlements, and it is no exaggeration to say that their anxieties were centered round the success of their own festival. Before this success could be assured, a great many arrangements had to be made. Thus, the festivals involve a long series of ceremonies — the cutting of the *mugus* tree in the bush; carrying it to the village and carving it to represent the ancestral spirits; the erection of the *mugus* post; ritual visits to the yam gardens; the harvest and transportation of the yams to the settlements and, finally, the sacrifices, the purification ceremonies and the

oblations when the produce is placed on a towering framework which completely surrounds the *mugus*. With all this, there are vast quantities of food to prepare; there are constant discussions concerning each person's contributions of pigs, coconuts, and other produce; and there is much anxious speculation about the yam crop.

The weeks leading up to the *mugus* are a time when the villagers are keenly aware of the presence and power of the ancestral spirits. The spirits "ride" the *mugus* post when it is carried from the bush to the settlement; and they also enter the village when the yams are harvested. Sexual intercourse is prohibited at various stages of the preparations, and it is said that anger or quarrelling may jeopardize the success of the festival. Given the supernatural interpretation of "cargo," it could be argued that the atmosphere during the *mugus* is peculiarly suited to visionary experiences and is likely to encourage revelations; and perhaps it helps to explain Sipura's dream as well as the emotional response which she received at Maianzarian. On the other hand, Wansa evidently felt that the reaction threatened to interfere with the preparations. The secular values of the festivals are immensely important, and a village faces serious disadvantages if it fails to discharge its obligations. Moreover, since these were the first festivals held for some years, the possible loss of prestige could have been particularly galling to Tofmora and Gutsuwap.

Finally, I have pointed to the generally optimistic temper of the villages at this time. The *mugus* festivals indicate that there had been some improvement in the social and economic condition of the Ngarawapum. The people were better off and their future most likely seemed less bleak than it had for a number of years; and from what we know of other areas, "cargo" activity tends to diminish in periods of prosperity. All things considered, I think we may agree that the practical success of the *mugus* dominated the thinking of the more important men. Perhaps at another time they would have been more ready to interpret Sipura's dream as evidence of supernatural intervention.

VII

I began this account with some remarks on the imprecise usage of the term "cargo cult." The events which occurred in Ngarawapum do not properly belong to any of the three kinds of "movements" which I distinguished. To the best of my knowledge, Sipura did not proclaim any imminent supernatural intervention in the affairs of the Ngarawapum; and apart from the girls whom she called her "police," she made no attempt to enlist supporters or to provide them with any form of organization. I have pointed out that we cannot know the precise signifi-

cance which Sipura attached to her experiences. Consequently, our interest centers upon the manner in which the community reacted at Maianzarian.

The strength of this reaction manifestly belies the "innocence" which some people attributed to Sipura's behavior. By this I do not mean that Sipura and her friends necessarily thought of their activities as anything more than "play"; but it is evident that their behavior carried additional implications for other people. Thus, it is impossible to produce a satisfactory explanation of the events at Maianzarian unless we relate them to the familiar context of "cargo" beliefs. The intensity of the reaction testifies to the strength of these beliefs; and one of the most interesting features of the situation is the apparent readiness to invest the incident with a significance which it does not seem to have held for the individual who was most directly concerned in it.

This raises the important question of the relationship between the visionary and the group. We may accept the view that the revelation of the prophet voices or corresponds to some acute need which is shared by a sizeable proportion of the members of the community. Otherwise, it is not likely to secure acceptance. But we may question whether the revelation and its interpretation is always vouchsafed the prophet in the fully integrated form suggested in the retrospective accounts of the movements. In a situation which is fraught with unresolved tensions, people may invest the unusual experience with general significance without requiring an explicit formulation from the person concerned; and it may be an over-simplification to attribute the initiative exclusively to the visionary. So we need to consider the possibility that in some instances the visionary may attach a purely idiosyncratic significance to his experiences. The general application may be made by others, who find in these experiences an answer to their own needs. We know, for example, that the prophet often plays a relatively passive role in the cult organization. The prophet, according to Worsley, is "frequently a retiring individual . . . claiming to be no more than the 'instrument' of higher powers," who is "manipulated" by other people.[8]

The Sipura "incident" provides us with a telling illustration of the ideological and social climate in which "cargo" cults develop. Once the situation crystallizes in a particular place, the movements show a remarkable tendency to spread to surrounding areas and to peoples quite remotely situated from the center of origin. The spread of the movements is the more noteworthy because New Guinea (indeed, Melanesia as a whole) is known as a region of marked cultural diversity and small autonomous societies. At least, ethnographers have placed a particular

8 *Idem*, p. 271.

emphasis on these characteristics; but the manner in which the "cargo" movements spread across socio-cultural boundaries seems to raise a number of questions.

Obviously, ideas may spread widely and rapidly where there are adequate means of transmission. We know, too, that such means existed traditionally in New Guinea and that they have been extended enormously under European contact. But more is involved than this, for the ideas which are transmitted require favorable conditions before they are likely to secure acceptance. Today, the culturally diverse peoples face similar situations. European contact has effected the same kinds of changes over the greater part of the area; it has stimulated the same hopes and the same anxieties, and perhaps we need look no farther than this for the conditions which favor the spread of the movements. But I think we should also consider the possibility that at some levels there is a readiness to accept new ideas — even new forms of organization — among New Guinea peoples. Margaret Mead's studies of the Arapesh provide an example of this "openness"; and the extremely rapid changes reported from the Highlands suggest that it is an aspect of New Guinea culture which deserves systematic investigation. Finally, the spread of the "cargo" movements indicates the considerable area of "shared understandings" which underlie the cultural variations in Melanesia. In future, I think we must give more attention to the common elements of Melanesian ideologies, world-views, and values, and we must explore the possibility that these common elements are associated with certain uniformities in personality, with something which we might for the time being describe as "Melanesian character."

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IBO ORACLES AND INTERGROUP RELATIONS[1]

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ORGANIZATIONS associated with Ibo oracles arose or expanded in response to the European and American slave trade along the eastern coast of Nigeria between about 1650 and 1850. These organizations linked together relatively independent and autonomous Ibo groups until the early 1900's, when British occupation of Ibo country weakened the influence of the oracle organizations, and created changes which rapidly ended the autonomy of these groups. While some attention has been paid to the analysis of the internal structure of independent Ibo groups, little has been written on the interrelationships between them. We are concerned here with how the oracle organizations functioned to provide a degree of integration of these Ibo groups. The data, derived from a survey of the literature and from information collected at Afikpo, throw light on the nature of intergroup relations in a segmentary culture based not only on unilineal descent groups, but also on associational and residential organizations.

The Ibo of southeastern Nigeria, who number about five million, are a sedentary horticultural people living mainly in a tropical rain-forest area.[2] Considerable variation exists in Ibo culture and social groupings but certain features characterized the Ibo as a whole in the period previous to 1900, and to a certain extent today as well.

The Ibo were composed of independent political units varying in size from several hundred to as many as 75,000 persons. Some of these groups occupied over 100 square miles of area, and in most of them the population was of unusually high density for Africa.[3] There were over two hundred of these independent units, which have been called tribes, subtribes, clans, village groups, and other terms, but for which no satisfactory name exists. These independent units were generally composed of groupings of patrilineal clans or large lineages, which in turn were subdivided into smaller patrilineal segments. In some units all the patrilineal

1 Field research was carried out in Afikpo Village Group, while an Area Research Fellow of the Social Science Research Council of New York, from October, 1951 to March, 1953, and was also facilitated by a grant from the Program of African Studies, Northwestern University. This is a revision of a paper read at the Northwest Anthropological Conference, Seattle, April 15, 1955. I wish to thank Dr Richard Daugherty for aid in the preparation of the map, and the Library of the International African Institute, London, for assistance in locating manuscripts.

2 Forde and Jones, 1950.

3 Densities today range from about 100 per square mile to nearly 1,000 per square mile. See Forde and Jones, 1950, pp. 10-11.

groups were able to trace relationships to a common ancestor, while in others unrelated patrilineal groupings were joined together. Age grades, secret societies, title societies, and other associational organizations played important but varying roles within different units, cross-cutting unilineal ties. Each independent unit had its own name and controlled its own land and trees, which were normally under the ultimate control of its leaders and the immediate control of the heads of the segments of the unit. Each unit had its own religious shrines and ritual ceremonies, its own methods of achieving status which were open to its members, and its own system of sports contests. The independent units had their own markets which were important centers not only for economic activity but also for communication and social intercourse. Each unit had its own warriors, though armed forces were formed, as a rule, from highly flexible small groupings which were informally organized. Every unit had its own friends and enemies among the various independent units that surrounded it. Constant bickering and small-scale warfare occurred between some neighboring units, and even at times within a single unit. Warfare was intermittent, but in terms of an extended period of time it was a persistent phenomenon. For the average Ibo distant travel of any kind was undertaken only under unusual circumstances.

The internal organization of these units varied in different sections of Ibo country. In the eastern area compact villages existed which were joined into village groups, each village group forming a unit composed of from several to more than thirty villages. Leadership in both the village and village group was partly in the hands of the male senior age-grades, the age-grade system being quite extensive and cross-cutting a double unilineal descent system and other ties. In parts of the central and in the southern and northern Ibo areas compact villages were rarer, but dispersed residential groupings based on patriclans or patrilineages were common. In these areas an independent unit was usually led by the elders of the lineages or clans concerned, though in some areas, particularly in the region east and northeast of Onitsha, leadership was achieved through membership in certain title societies. In the western Ibo areas independent units tended to be composed of small patrilineal chiefdoms, each with a single dominating head.

No political superstructure, such as a federation, a confederacy, or a state existed. The Ibo units remained a relatively balanced grouping of independent political structures which never developed into a large formal organization, though some units absorbed or conquered others, some died out, some fragmented, and some changed their characteristics through immigration and emigration.

THE NETWORK OF INDEPENDENT UNITS

Some external relationships between independent units existed. These can be classed into three types. The first was the relationship of independent units to those immediately around them. Each unit was in certain ways and for certain purposes linked with nearby units, and we can conceive of Ibo country as a series of units interlocked for certain purposes, but sometimes cut off from each other by warfare or disputes. These relationships grew out of the ties of individuals to one another, and out of relationships between social groupings in neighboring units.

Units made alliances with those nearby for purposes of warfare or to permit trade between them. The allied units were sometimes related, reflecting migration patterns. Both alliances and enmities between units might be relatively permanent, though they sometimes shifted according to land and population pressures, trade opportunities, and for other reasons.[4] In some cases no formal alliances existed, the units simply being at peace with one another and permitting trade and other contacts to occur.

Sometimes neighboring units which were politically independent of each other were linked for religious or ritual purposes. For example, Green states:

> In some instances there is a recognised order in which the ceremonies of different spirits must be performed. The new yam ceremonies which are initiated in Agbaja, by the village of Abɔse, must be done before those of the village group of Umu ɛzɛala can start. In this case certain distant kinship bonds are recognised between Agbaja and Umu ɛzɛala.[5]

Diviners, native doctors, and priests visited nearby independent units or were visited by clients from neighboring units.[6]

Sometimes a community was involved in an internal dispute which it was unable to settle. It might then call on the elders or leaders of a nearby social unit to hear its case as independent judges. Cases of this kind have occasionally occurred

4 For example, Afikpo and Amaseri, related and neighboring groups, were constantly at odds with each other, while Afikpo and Unwana, also related to each other, sometimes combined to fight non-Ibo east of the Cross River. In the Onitsha area there was considerable warfare and peacemaking between groups during the second half of the last century, possibly accentuated by the development of European trading interests (Crowther and Taylor, 1859, pp. 427-429). In the western Ibo area the Ekumeku society seemed for a time to unite certain independent groups, but it did not persist, and seems to have been, in part, an anti-European organization (Basden, 1938, pp. 382-384; Dennis, 1904).

5 Green, 1947, p. 52.

6 For example, Green *(ibid.)* states that "an Agbaja man may call on the priest of the guardian spirit of a neighbouring village-group to bring the ɔfɔ of the spirit so that he may swear his innocence on it in a case." Professional religious men in units near Afikpo were sometimes consulted in the past as well as today.

at Afikpo in the past. In the case of warfare between two groups, a neighboring group might intercede to arrange for peace.[7]

Marriage created important links between independent units. In some Ibo groups exogamy was required, for example in Okolochi and Owerri,[8] while in others, such as Agbaja,[9] marriage outside of the village group was not the rule but was permitted. External marriage links tied independent political units to each other, binding families, lineages, and other groupings in reciprocal duties and obligations. Marriage residence was generally patrilocal and the wife would return home for various ceremonies and sometimes her husband worked or took part in activities in her home unit. Such marriages made it possible for a husband to trade safely with and travel into the units in which he had married, and he was generally welcome and safe at the domicile of his wife's close relations. Thus trade with the independent units into which a man had married was possible if they were not at war or at odds with his own.[10]

External relationships of these kinds were not always found between all neighboring units, and not all kinds were always found together. Their existence did not mitigate the fact that the average Ibo lived and interacted largely within the range of a single independent unit.

LONG-RANGE INDIVIDUAL CONTACTS

The second type of external relationship consisted of long-range contacts of professional specialists without the extensive backing of formal social organizations. It included religious specialists, such as diviners, medical men, and priests, who travelled a considerable distance outside their own independent units,[11] sometimes making regular tours. They sometimes had clients visit them from considerable distances. Some of these professionals also carried out trading activities, and there were others who travelled mainly as traders and carried on little or no religious activities. When the contacts of these religious personages and traders were with neighboring groups near their own they should be included in the first type of external relationship discussed above. The distant contacts did not seem to have the effect of helping to cement strong relationships between independent political units and were not part of the system of interlocking neighborhood units.

7 Meek, 1937, p. 246.

8 *Idem*, p. 263.

9 Green, 1947, p. 154.

10 See Green (*op. cit.*, ch. XII and XIII) for a discussion of the implications of marriage outside of the village group.

11 For example, Kalu (1938, pp. 159-160) mentions native "doctors," apparently from Ohaffia, on tour at Opobo, sometime after 1899.

These professional men were free to travel long distances and to follow their occupations, not because of the power or authority of their own independent unit or the social groupings within it, but because the goods that they traded were much desired or because of their associations with the supernatural world. This was not a linking of social groups as much as of individuals in specific occupations with clients over wide areas.

THE ARO CHUKU ORACLE

The third type of external relationship was that represented by the oracles, whose agents travelled and traded widely in Ibo country under their oracle's protection with the backing of their people at home. These agents and those at home who controlled the oracles dominated the slave trade and trade in goods within certain sections of Ibo territory. There were perhaps half a dozen oracles of significance, of which the most influential and widespread was *Ibini ɔkpabe,* "The Long Juju," of Aro Chuku, which will be considered first.

Aro Chuku, an independent village group of nineteen communities along the central section of the eastern border of Ibo country, was, and remains today, a relatively small Ibo group.[12] Located not far from the Cross River, it was in a strategic geographic position with regard to contacts with Ibo to the north and west and with the Efik and Ibibio slaving centers at the mouths of the Calabar and Cross rivers to the south, where foreign ships came to trade in slaves in considerable numbers between about 1650 and 1850. The history of the rise of the Aro to a position of influence is uncertain.[13] The Aro oracle, which was located in the Aro Chuku area, was considered by the Aro to be intimately associated with them, whether they were at home or abroad. They acted as the oracle's agents and took great pride in this connection. This relationship was recognized by many Ibo.

The Aro, wherever they lived, were feared and respected as agents of their oracle. Aro settlements were found at Bende, Uburu, Aba; in the Owerri, Okigwi, Ohaffia, Ada, and Afikpo regions, and elsewhere.[14] In these areas they dominated the local market and the buying and selling of slaves, and they held strong controls over non-Aro Ibo in matters concerned with trade and their oracle, though they did not usually exert full social and political control over local groups. The

12 The population of Aro Clan and Native Administration in 1953 was 6,342 (Nigeria, Census Superintendent [The Government Statistician], 1954, p. 31). The number of Aro living away from home during the period under consideration must have been quite large, probably larger than those living at Aro Chuku. For example Talbot (1926, vol. 4, p. 43) using the 1921 census, gives a figure of 14,163 Aro living in their home province of Calabar, and 41,861 Aro living in Owerri and Onitsha provinces.

13 Jones, 1939; Simmons, 1958.

14 Umo (n.d.) lists the more important settlements.

FIG. 1. Settlements, oracles, and trade routes in the Ibo country, southern Nigeria.

power of their oracle to kill or to aid persons was believed to be great, and the ability of the Aro to raise armies of mercenaries to fight their battles for them was well known, hence it was relatively easy for them to establish settlements wherever they desired.[15] In their settlements they established shrines for *Ibini ɔkpabe* and carried out rituals to this oracle.

These Aro settlements appear to have been of three types: (1) small settlements which interfered little in the local affairs of groups near or in which they settled, and which were sometimes along Aro trade routes, such as at Akaeze; (2) larger settlements about a central market which dominated the market but still left the local Ibo groups considerable autonomy, such as Uburu; (3) large-scale settlements in which one or more village group was thoroughly dominated, Aro control extending over land, property, and religious rituals. In this case the settlement represented a population migration for farming and other purposes as well as for oracular and trading activities, such as at Afikpo. The Aro in all three types of settlements actively coöperated with those at Aro Chuku. They were not strongly dominated by the Aro Chuku Ibo, but acted as linked kin and residence groups, with similar interests and ideologies. The meager data that we possess concerning the origin of these Aro settlements indicate that they probably arose during the period of the European slaving activities along the coast (in non-Ibo territory) between about 1650 and 1850.

Mercenaries

The Aro agents had at their service certain Ibo who acted as mercenaries. These Ibo were mainly from the eastern area and included the Abam and the Ada or Edda. Ohaffia and Abiriba also took part in these activities, as well as some Aba from southern Ibo country.[16] Some of these groups were of Aro origin while others were not. The mercenaries would sack communities or villages for the Aro, keeping as booty the heads of the dead (used for ceremonial and prestige purposes) and whatever property they obtained, and selling or turning over those captured to the Aro as slaves. These warriors used iron machetes and fought in close quarters. The Aro had guns but rarely engaged in warfare themselves.[17]

15 Several writers have suggested that the various sections of Aro Chuku had the right to act as agents and to settle in different areas of Ibo country. See Talbot, 1926, vol. 1, p. 183; Venour, 1902, p. 89; Anon, n.d., pp. 4, 7; Weber, n.d., p. 46. The matter needs further investigation.

16 See Ike, 1951, p. 42; Forde and Jones, 1950, pp. 54, 56; Talbot, 1926, vol. 1, p. 184. There was a large Aro settlement at Aba according to Leonard (1898, pp. 190, 192). Afikpo claim that some of their men used to join the Ada, to whom they were distantly related.

17 Basden, 1938, p. 385. Uku and Easterfield (n.d., p. 14) state that the "blood of an Aro man was too precious to be spilt in battle, and his death would call for large scale reprisals which were avoided whenever possible as being unnecessary and wasteful."

The relationship was mutually beneficial. In some areas the Aro, as traders or as agents of the oracle, would scout the villages to be attacked and would pass on the information to the mercenaries who would use it for a surprise engagement, usually in the very early morning. If two villages were in conflict the Aro might obtain mercenaries for one of them for a fee. The warriors also attacked groups that were unwilling to coöperate with the Aro.[18] The existence of mercenaries facilitated Aro trade and made it easier for the Aro to move about openly.

The mercenaries ranged widely. They went almost as far as the Niger in the Onitsha area,[19] and they raided the highly populated region east of Onitsha, the Udi plateau region, and into northern Ibo country as far as the Nsukka area.[20] They also raided southwestward into the Ohuhu-Ngwa area of southern Ibo country,[21] where the Aro dominated a trade route from Bende to somewhere below Aba. These mercenaries apparently had camping and stopping places in Aro settlements in the regions in which they were fighting which were a long way from home.[22]

Consultation with the Oracle

All male freeborn adult Aro (*amade*) could act as agents for trade and for the oracle. They would suggest to persons with unsolved problems or to persons engaged in disputes or legal cases that were not easily settled that they should go to the oracle to obtain advice or to determine the matter. In many instances such urging was unnecessary, since the local people already knew of and used this procedure. The persons involved, or their representatives, would, for a fee, be led by an agent, or a series of agents, safely to Aro Chuku. The agents obtained information on the case, sometimes in a seemingly casual manner. The agents and their clients were relatively safe in travelling long distances since they travelled largely over Aro-protected routes, since the oracle was believed to have the power to kill or to make ill those who harmed its agents, and since the Aro had mercenary forces at their disposal. Parties of consultants going to Aro Chuku might be of considerable size.[23]

Once at Aro Chuku the persons involved were usually quartered in the compound of relatives of the agents who had brought them. Here further information

18 Johnson (1904, p. 53) mentions the destruction of the village of Obegu, near Akwete, by Aro and Abam forces. See also Talbot, 1926, vol. 1, p. 273.

19 Trowell (1903, p. 90) states that at Ukulu and Norgu platforms were erected in the trees "for the purpose of defence, and especially against the attacks of the Abams, a fierce and cruel people." See Bennett, 1894; Anon, 1904; Jordan, 1949, pp. 13-14; Smith, 1898, p. 82.

20 Forde and Jones, 1950, p. 54; and data collected at Afikpo.

21 *Ibid*. See also Johnson, 1904, p. 53; Talbot, 1926, vol. 1, p. 273.

22 Anon, 1904.

23 Great Britain (1900, pp. 23-24) mentions a party of 800 from the Niger River area.

was sometimes obtained, which, along with that gathered earlier, was passed on to the persons who "worked" the oracle, so that when the oracle reached its decisions it often showed considerable knowledge of the affairs of those who consulted it. At the time of direct European contact in 1901 the oracle was situated on a small island in a pool of water in a deep gorge. Here, screened off from actual sight of the oracle, the consultation was carried out.[24] It is not known how most Ibo conceived of the oracle other than considering it a powerful supernatural force. The Afikpo did not seem to feel that it had any particular shape or form, but that it was capable of causing illness, death, and other misfortunes, and that while it resided at Aro Chuku it could exert its influence anywhere.

If the consultation concerned a dispute and the decision went against a person he might have to pay a fine to those controlling the oracle; he might be sacrificed to the oracle, or more likely, be sold into slavery. If the decision was one in which a person was indicated to be a witch, a sorcerer, or a thief, he would generally either be sacrificed or sold into slavery. If a person won his case, if he lost it but was freed upon payment of a fine, or if he came to consult the oracle over some nonlegal matter, he would be led home by Aro agents.

Serious disputes which the members of a locality could not settle themselves were likely to be taken to the oracle. Under the common Ibo system of group leadership, of councils of leaders — usually of elders — it was sometimes difficult for families, lineages, clans, communities, and other social groupings to reach definite decisions in certain cases. This was particularly noticeable in land disputes, in property and inheritance disagreements, and in settling persistent warfare. Sometimes the only recourse that could be agreed upon was to consult an outside agency, the Aro or another oracle.[25] Again, accusations of witchcraft, of sorcery, or murder, and of stealing (an extremely serious offense) sometimes were difficult to settle satisfactorily because the evidence was contradictory or was insufficient. Both in the case of disputes and of accusations diviners and priests might be called in to settle the matter. However, they were not always able to prevent disputes, murders, suspicious deaths, and thefts from continuing even after a decision had been reached and certain persons convicted. It would then be realized that the matter was beyond local solution. The oracle thus acted as a final court, a supernatural judicial body.

24 The actual process of consultation has never been well described. For descriptions of the oracle site seen Anon, 1902; MacAlister, 1902; Partridge, 1905, pp. 57-58; Smith, 1902.

25 Note how the technique of obtaining outside help by calling in judges from a nearby independent social unit *(supra)* is a part of the same pattern. However, judges from nearby social units were likely to be anything but impartial, since they might be linked by alliances, kin ties, or in other ways, with the disputing parties.

The oracle also attempted to solve persistent problems involving events considered unfortunate to a community, to social groupings, and to individuals. Poor crops, continued illness, epidemics, lack of children, and other matters were brought to the oracle for explanations when they were not solved by local action. The diagnosis of the oracle varied. Illness might be caused by supernatural agents, by failure to perform certain religious ceremonies, by the incorrect performance of a ritual, or perhaps because the ancestors were angry over some event or felt that they were being neglected. Sometimes medical advice was offered for illness, and for unfortunate conditions, such as poor crops or epidemics, special rituals might be suggested.

The decisions of the Aro oracle must have taken local opinion and feelings into consideration.[26] They probably did not consistently contradict locally held attitudes. The information obtained by the oracle agents probably helped prevent decisions from being too far out of line with local opinion.

Trade Routes

Aro agents dominated much of the trade in Ibo country. Able to move relatively freely along certain trade routes without fear of being attacked, they controlled some of the major Ibo markets or else were closely associated with them. Slaves were perhaps the greatest and most valuable single commodity though a variety of goods was also traded. The Aro also obtained slaves from other sources than through their oracle. They captured persons by waylaying isolated individuals, persons returning from the farms, traders and travellers, and children away from home; or other Ibo captured such persons and sold them to the Aro. Families sold their younger children — particularly when there were many in the family — to the Aro for money and goods. A man who was in debt could clear himself by selling himself into slavery,[27] or his debtors might seize him and sell him. Persons captured in warfare were also sold into slavery. Finally, individuals who were considered to be physically abnormal were likely to be disposed of by being sold out of their community of birth.[28] Not all slaves were sold directly to Aro traders, and some were bought and sold without ever coming into Aro hands. The slaves, either as permanent followers of the Aro, or during transport for resale, helped to carry the Aro trade goods.[29] On the basis of only meager evidence, it seems likely that most of the slaves who came into Aro hands were from sources not directly associated with their oracle, and that those who became slaves following oracular consultation formed a much smaller group. Not

26 Meek, 1937, p. 48.
27 Basden, 1938, p. 253.
28 Meek, 1937, pp. 224-225; Harris, 1942, pp. 40-45.
29 Uku and Easterfield, n.d., p. 13.

all Aro slaves were destined for the foreign slave trade, many remaining as slaves of the Ibo and other groups in southeastern Nigeria.

While certain areas, such as Aro Chuku and Bende, were heavy slave-trading centers, slaves were bought and sold all along the Aro trade routes. Despite the cessation of the foreign slave trade by about 1850 the Aro continued to trade in slaves within southeastern Nigeria and took an important part in the internal palm oil trade which was linked with the developing export trade in palm oil after 1850. Slaves were sold openly in the Ibo markets until European influence brought the practice to an end, beginning about 1870 in the Onitsha area and extending to all of Ibo country by about 1920.[30]

The period of foreign slave trade was marked by the alignment of Ibo trade routes in a north-south direction, whatever their previous arrangement had been, and by the development of the coastal towns as important trading centers, whereas previously they had been nonexistent or unimportant. The following account of the Aro trade routes covers the period from about 1840 to 1920 when information on them was available.

Bende, more centrally located than Aro Chuku with reference to Ibo country, was a major center for the slave trade, even though the Aro oracle was located at Aro Chuku. The Aro, although apparently a minority at Bende, dominated its market.[31] From Bende one route went northwest through Uzuakoli to Ihube (near Okigwi) and passed to the east of Awka, a non-Aro group which was connected to it by a branch route.[32] Two important Aro communities, Ndizorgu and Ndienyi, were situated northwest of Bende along this Aro route.[33]

The route from Bende proceeded to Nike, an important trade center in northern Ibo country. The Nike, farmers by profession, were probably the principal slave traders in this area, though they were not Aro. The Abadja, southwest of Nike, were, according to Horton,[34] a "land-starved over-populated group," from whom the Nike obtained slaves in commerce and "with the aid of Ada

30 Aro Chuku was captured and the Aro oracle "destroyed" by British military forces in December, 1901 and the country surrounding this village group was put under control by 1902 (Anon, 1902; Great Britain, 1903, pp. 4-5; Smith, 1902; MacAlister, 1902). These military activities, and other expeditions into Ibo country during the ensuing fifteen years ended Aro domination over trade in goods, and slave-trading became secret, the slaves being sold in private near the markets, or in traders' houses. Today, the practice of "giving" children to a friend or another person to raise in return for money is practiced by Aro and by other Ibo. The military activities did not terminate the judicial and advisory activities of the oracle, which continue in modified form today.

31 Harris, 1942, p. 39; Leonard, 1898, p. 202; Anon, 1921.

32 Horton, 1954, pp. 311-312.

33 *Ibid.*

34 Horton, 1954, p. 311.

mercenaries hired by the Aro, who were the ultimate recipients of many of them." From Nike one route went northwest through Ogugru to Iddah, outside of Ibo country. This section was operated largely by Hausa and Fulani who traded horses and firearms (the latter from European sources on the Anambra River) southward and slaves northward. A third route went east via Nkalagu to the Ezza country, an area rich in yams.[35] The main Ezza market possessed an Aro "quarter."[36] The Ezza and other northeastern Ibo exported rubber and yams to the north and imported horses.[37] Aro influence existed in this general northeastern Ibo area,[38] and spread into the Obubra and Yakö regions.[39]

Another major route from Bende was northward through Akaeze to Uburu, one of the largest Ibo markets in Nigeria, where horses, slaves, salt, and other commodities were sold in quantity. From Uburu the route went north to Nkalagu and then east to Ezza country, west to Nike, and apparently north as well.[40] From Uburu a route also went southeastward to Afikpo, which is partly of Aro origin, and from there through Enna, a non-Ibo group, to Aro Chuku.

From Bende another route went southeastward through the Ohaffia country to Aro Chuku. This was a main road to and from the oracle. From Aro Chuku the Aro traded slaves, palm products, and other goods southward at Itu[41] and other nearby points to the Ibibio, Efik, and Umon, and these in turn traded them to other Africans within the coastal area, or to Europeans at the mouth of the Cross and Calabar River. The Aro also controlled a trade route from Bende through Aba, and south to Akwete and toward Opobo, though they did not dominate the town of Opobo.[42] Along this route Aro groups settled among other Ibo. The Aro apparently also traded north and south along the Imo River.

The Aro did not dominate the coastal ports where the trading vessels anchored. Opobo, Bonny, Eket, Brass, Degema, Creek Town, and Calabar were sparsely settled areas which, following the establishment of European trade, developed into little chiefdoms. Some, notably Bonny and Opobo, contained important and in-

35 *Ibid.*

36 Livingstone, 1920, pp. 29, 57.

37 Horton, 1954, p. 311.

38 Forde and Jones, 1950, p. 59.

39 Partridge, 1905, p. 46; Forde, 1938, p. 333, n. 1.

40 Livingstone (1920, p. 58) says of Nkalagu that "it appears to form commercially a link between the North and the South. For to it the Hansas [Hausa] come from Northern Nigeria, bringing horses. The chief buyers are Aro traders, who bring them south to Uburu and other places." Horses were killed and eaten in certain Ibo ceremonies.

41 Kalu, 1938, p. 160; Partridge, 1905, p. 45.

42 Leonard, 1898. Kalu, an Ohaffia Ibo, followed this route from Uzuakoli to Akwete sometime before 1900 (Kalu, 1938, pp. 158-159).

fluential Ibo populations, but they were not Aro dominated.[43] The Aro did not control the trade in the tribal areas along the coast and in the Niger Delta region, though throughout these areas they were active as agents for their oracle.[44]

The coastal traders were the middlemen between the Aro and the European and American traders. From these traders they received guns, ammunition, tobacco, gin and other alcoholic beverages, cloth, metals[45] and various wares, which were exchanged for slaves, palm oil, ivory, coconuts, and other goods. The European goods which came into Aro hands through these middlemen were traded over much of Iboland.

The Aro were primarily land traders. While their headquarters at Aro Chuku was quite near the Cross River, they did not control the river trade. The section of the river near them was apparently in the hands of the Umon; that to the north was controlled by Akunakuna and that to the south by the Efik.[46] The Niger River, within the Ibo area, was dominated by numerous small independent Ibo groups, such as the Aboh, Ndoni, Osomari, and Onitsha, and the Aro do not seem to have had a trading foothold there.[47]

Non-Aro Ibo became to some extent directly absorbed into the Aro system. We have already mentioned the cases of Nike and of Awka. In Afikpo non-Aro could buy a certain shrine (ɔfɔsi) which gave them the right to act with the freedom of the Aro, and, to a certain extent, as Aro agents. Meek mentions a trader from Awgu who early in life visited Aro Chuku and became an Aro agent in his own town and a wealthy and important leader as well.[48] The absorption of non-Aro into the complex trading and oracle system is undoubtedly part of the general pattern of the absorption of people and cultures which is so characteristic of Ibo culture. The linking of Aro trade with that of other peoples on the periphery of the Aro area of influence, such as in the case of the Nike, the Awka, and the northeastern Ibo, is to be expected since the Aro formed part of an extensive system of trade in southeastern Nigeria.

There were areas of Ibo country, in addition to the major river systems, where considerable slaving activities and trade in goods were carried on, in which Aro

43 Crow, 1830, ch. 10; Harris, 1942, p. 50, n. 17; Dobinson, 1895, p. 14; Dike, 1956, ch. 2; Jones, 1939, p. 103.

44 Cardi, 1899, p. 52; Leonard, 1906, pp. 30, 254; Pratt, 1905, p. 148; Schön and Crowther, 1842, pp. 51-53; Great Britain, 1900, pp. 23-24; Talbot, 1932, p. 45; Hubbard, n.d., pp. 88, 205.

45 Jones, 1958.

46 Partridge, 1905, pp. 32, 68, 73; Jones, 1939, p. 103.

47 Cole, 1862; Crowther and Taylor, 1859.

48 Meek, 1937, p. 133. Leith-Ross (1937, p. 210) mentions non-Aro Ibo near Owerri town who became priests through being "dedicated" to local shrines under the direction of the Aro oracle.

traders had little or no interest. In the Ibo areas west of the Niger they were unimportant. In the region just east of this river they were not very active as traders, though they served as oracle agents. In some sections of Ibo country their trading interests and their activities as oracle agents were not as important as those of other oracles. There were villages and village groups, where people lived and died without being greatly affected by the Aro, for the Aro did not by any means control large stretches of the country, but restricted themselves to certain centers and routes.

OTHER ORACLES

Other Ibo oracles showed characteristics in common with that of the Aro, though they were not as influential, lacked mercenary forces, extensive settlements away from home, and trade domination over as wide an area. Agbala (or Agbara) at Awka, was associated with the Awka, who were famous blacksmiths and travelled widely throughout Ibo country acting as agents of their oracle, and as traders (both in slaves and goods), diviners, circumcizers, and doctors. Because of their association with the oracle and their usefulness as blacksmiths, they travelled and worked unmolested over long distances.[49] To a large extent they operated in the area just east of the Niger, and west of the main Aro trade routes, though within a region where Aro mercenaries were active.

The Awka oracle was hidden in a grove and possessed a mysterious voice. The system of recruiting clients and the type of cases and disputes tried were similar to those of the Aro oracle. Those found guilty or in the wrong might be killed, forced to pay fees to the oracle, or be sold into slavery. The Awka strongly supported the oracle and apparently made good profits from it. Destroyed by the British in 1905, and again in 1921, it is probably still functioning today in attenuated form.[50]

Another influential oracle was Igwe-Ke-Ala of Umunoha, northwest of Owerri. As in the case of Awka oracle, its agents travelled widely in the area west of the main Aro routes. While its agents were not famous for any special skills, this oracle possessed much the same pattern of organization as Agbala of Awka, and they were active slave traders.[51]

Minor oracles have been reported from Awgu,[52] Ozuzu,[53], Obunka,[54] and

49 Smith (1905, p. 4) mentions Awka oracle clients who "came for the most part from the Southern Idzo [Ijaw] and Calabar Districts." See also Clifford, 1923, pp. 829-830.

50 For the Awka oracle see Basden, 1938, pp. 77-84; Chubb, n.d., p. 7; Clifford, 1923; Forde and Jones, 1950, p. 32; Smith, 1905; Talbot, 1926, vol. 2, pp. 52-53.

51 See Basden, 1938, pp. 91-92; Chubb, n.d., p. 7; Meek, 1937, pp. 45-47.

52 Meek, 1937, pp. 47-48.

53 Talbot, 1932, p. 23.

54 Basden, 1938, p. 96.

Eha-Emufu.[55] None of these dominated trade over any great distance, and they were primarily for consultation in legal, religious, and medical matters, though those found guilty or in the wrong apparently could be killed or sold into slavery.

The origin of two other minor oracles throws light on the process of development of Ibo oracles. At Enu-gwu (Umunri group) a travelling trader combined his business with the profession of "doctor," making a considerable success of the latter. Later he remained at home and his patients came to him. His villagers soon saw how successful he was as a medical man and asked to share in the business. He agreed on condition that he become "head" of the village, which was granted. The villagers began to solicit and to guide patients to him. With the help of a son-in-law he moved his headquarters to a thick grove and began to take on important cases of the kind typical of the oracles. He affected a mysterious and hidden voice, and elaborated the secrecy and the ritual until an oracle with supernatural powers and agents was, in effect, developed.[56]

At Ezira, about twenty miles south of Awka, a woman controlled a spirit shrine which had but one specific purpose, providing explanations for persons' deaths by means of communication with the deceased. Use was made of a concealed voice and other rituals. When the woman's younger sister, Mgbafo, became priestess, she broadened the type of case handled to include almost any kind of dispute or accusation.[57]

In both cases there was a development from one or two professions to a full-scale oracle serving diverse needs. In the first case, where the information is more detailed, economic factors clearly acted as an incentive, and the villagers became willing agents and solicitors. The elaboration of the mystery of the oracle, the use of a sacred place in the bush, of concealed voices, and other ritual devices, added to the effectiveness of the oracle. It is likely that the histories of the development of other oracles are similar, though we lack the data to confirm this.

The territories covered by the agents of the oracles overlapped, and agents for different oracles solicited business through their friends and trading contacts in the same communities. In some cases a choice of oracles was possible, and it was even possible to consult a second oracle if not satisfied with the first.[58]

The oracles fall into three types in terms of the nature of their organization and their activities. The first, the Aro organization, is characterized by extensive

55 Meek, 1937, p. 48.

56 Basden, 1938, pp. 84-88.

57 *Idem*, pp. 92-96; Talbot, 1926, vol. 2, pp. 53-54.

58 At Afikpo agents of Igwe-Ke-Ala, as well as those of the Aro oracle, have been active for a long time. The latter dominate and are more frequently consulted. See also Meek, 1937, p. 241; Basden, 1938, p. 91.

settlements over wide areas, strong trade and political controls, and the association with Ibo mercenaries. The second includes the organizations associated with Agbala and Igwe-Ke-Ala. These lacked extensive settlements and mercenary forces, but were influential in trade and judicial and religious matters over considerable areas. The third type, the organizations associated with the minor oracles, were more localized, and confined themselves mainly to religious, legal, and medical activities. The borderline between oracles of this third type and influential doctors, diviners, and other religious personages cannot be sharply delineated.

CONCLUSIONS

Three types of external relationships between independent Ibo political units existed. The first, the linking of neighboring independent units into a complex network of ties, was based on trading, military alliances and friendships, the use of judges from nearby units, ritual ties, and marriage links. These relationships provided fruitful social, economic, and religious contacts between neighboring units and their members, and increased the possibilities of trade and social contacts within the local area without destroying the essential autonomy of each unit. They made possible a peaceful and slow redistribution of the population and the diffusion of new cultural elements from one unit to another.

The second type of external relationship was that of the widespread contacts of traders, religious specialists, particularly diviners, "doctors," and priests, without the force of an organized group behind them, who travelled long distances with relative freedom. We have already described a case, that of the Enu-gwu oracle, which indicates how an oracle system could develop out of this type of relationship. The transition between the profession of independent travelling professionals and the oracle system was a gradual one. Relationships of this second kind functioned to solve medical and other problems of individuals and of groups who were unable to find a remedy locally, involved some trade and craft distribution, and provided a means of culture contact and diffusion.

The third relationship, that of the oracles, involved the organized force of social groupings. With the Aro it came to involve extremely strong trade domination, military backing of unusual magnitude for Ibo culture, and the development of settled communities in sections of the country. The more extensive the influence of the oracle the less it was purely religious in character, and the more it involved economic and political domination.

This third type of external relationship made for a rapid spread of material culture and new cultural patterns, and helped to maintain Ibo cultural and

linguistic unity through the contact and movement of Ibo over a large area. It served to facilitate the distribution of trade goods, including food. There were no Ibo groups in the central Ibo area which lacked oracles or oracle connections and yet held a powerful trading position. On the other hand the oracle system was not absolutely essential to trade, since Ibo groups outside of it, such as those on the Niger River, carried on trade. The oracle system also served to redistribute the population from areas of high population to areas of lower density. Many of the raids of the Aro mercenaries were into the central Ibo area, the region, perhaps, of highest density.

The system of oracles probably helped produce greater social cohesion within the independent political units which lacked oracles of thier own. It provided a final solution to problems and disputes that were difficult to resolve at home, thereby reducing tensions and conflicts within local groups. The use of outside supernatural legal agencies to reach important decisions prevented feelings from rising against local judicial bodies or individuals. The oracles also served as a means of eliminating persons considered undesirable by the local group, and thus made for smoother functioning of the group.

The groups that possessed oracles were strengthened in their internal organization by their existence. None of the oracle groups divided into two or more separate oracle organizations as far as we know. The members of an oracle group had common goals and interests wherever they were living — one reason why such groups do not seem to have merged into the communities into which they settled. The members shared activities of high prestige, with benefits which differentiated them from other persons. To be an Aro or an Awka was to be a "superior" Ibo.

The oracle systems assimilated non-oracle units both at the periphery of each oracle's area of influence and within their areas. The Awka, Nike, and coastal traders, for example, became linked to the Aro system, giving it broad contacts and tying it to the larger pattern of trade in southeastern Nigeria. This was true, though to a lesser extent, with the other oracles. Within the area of an oracle's influence non-oracle Ibo sometimes became agents after visiting the oracle or making some other arrangement.

In the case of the Aro oracle a state of symbosis existed between the Aro agents and the mercenaries who worked with them. Neither the agents nor the mercenaries dominated the other. It was a relationship of strong independent groups for highly specific purposes to provide certain gains for each group. It is likely that it was this association that, more than anything else, made it possible for Aro influence to become so widespread.

The oracle system was a possible step in the creation of a political superstructure within Ibo country. It provided a means for the movement of persons from their home area as agents of oracles and yet a means of maintaining very strong links with home, much more so than in the usual forms of Ibo migration. It was a method of organizing a widespread group of persons with a common identification in contrast to the segmentary characteristic of most of Ibo society. If the slave trade had continued for a longer period of time without European occupation of the country, it is problematical whether a political state or a large-scale political organization would have developed out of the Aro oracle system. We do not know because we cannot tell to what extent the system was still developing, or was stabilized just previous to European occupation.

One thing, however, seems clear. The oracle agents did not seem to be primarily interested in political domination *per se*. They were interested in trade, in accumulating wealth, in the rewards associated with the oracle organization and the system of slavery, and they seemed to be interested in political control mainly in so far as it pertained to these activities. They rarely attempted to fully dominate the local group, but mainly restricted themselves to matters concerning the protection of their own interests. The Aro did not set up local rulers, integrate village groups into confederacies, or conscript armies from local populations to fight their battles.

The Aro themselves lacked a strong hierarchical organization and strong centralization of power. There seems to have been no single dominating Aro lineage or clan. Each Aro settlement was to a large extent autonomous, though it coöperated with the Aro at Aro Chuku and with other Aro settlements. Other migrating Ibo groups generally lost contact with home unless they settled nearby, and sometimes amalgamated with a group that they settled in or near. It is probably significant that not one oracle but a series of them developed relatively independently, each with, more or less, its own sphere of influence. They were not equally balanced in terms of power, but rather existed side by side. It is likely that oracles themselves are characteristic of Ibo culture, and not simply a response to the foreign slave trade, though this trade undoubtedly led to their expansion. Slave-trading itself, of course, was probably indigenous to the Ibo and expanded as a response to the foreign trade.

In some parts of West Africa, such as the Yoruba and Dahomey areas, state systems developed in response to the slave trade. But small kingdoms or chiefdoms with centralized hierarchical authority already existed, which then expanded by conquest as a consequence of the trade. The Ibo lacked this centralized authority in the first instance, and the slave trade did not require a radical reorganization of

the political system to accord with it, nor was the trade a threat to the basic tenets of the system of organization as European occupation later proved to be.

Ibo culture emphasizes considerable individualism, striving for social position, and for rank and prestige by individuals and groups. Frequent fission and fusion of social groups occurs, and the society is segmentary at heart. It would have been difficult for the Aro to develop a firm political superstructure even if they had desired to do so. Such an organization could probably have arisen only over an extremely long period of time, or as a result of conquest by an outside state.

Ibo culture maintained its stability through the balance of its numerous independent units.[59] The inter-association of nearby independent political units and the existence of diviners, native doctors, and priests with wide contacts did not disturb this balance, but rather provided profitable relationships between the various units without destroying their independence. The oracle systems, on the other hand, integrated sections of Ibo society beyond the local level more than did any other kind of Ibo organization. The oracle system also contained serious disruptive patterns. These were not the conflicts and frictions produced by cleavages between social units, such as commonly occurs in African state and segmental societies,[60] and which, of course, also occurred in Ibo society. Rather, it was a kind of disorganization which grew out of the activities of the oracle system itself. Families were broken up and communities disturbed by the loss of members who did not return from the oracles or who were waylaid into slavery. Communities were looted and their members dispersed by the mercenaries. Individuals suffered extreme hardships. While persons were fearful of being seized by anybody if they went far from their home area, they were also fearful of being captured by oracle agents, and this was an important factor in keeping communities and individuals localized and isolated. The price of the oracle integration was high. The disruptive and isolating tendencies were as much a part of the external relationships of the various Ibo units as were the integrative factors.

There were some checks and balances on the authority of these oracle organizations, as there were checks and balances in African state systems where more highly organized superordinate groups existed.[61] People sometimes had a choice of oracles to consult; the decisions of the oracles took into consideration local opinion and feeling; and there were limits to the power that the oracle organizations could or were willing to exert. Nevertheless there was a degree of despotism practiced by the more powerful oracle organizations which represented a lack of balance of social

59 Compare with the Nuer (Evans-Pritchard, 1940) and the Tallensi (Fortes, 1940).
60 Fortes and Evans-Pritchard, 1940, pp. 1-23; Gluckman, 1954, pp. 5-11.
61 Fortes and Evans-Pritchard, 1940, pp. 10-14.

forces. We cannot say, because we lack the historical data, whether this was because the oracle systems were still in the process of development or not. We do know that these non-integrative aspects were widely and firmly entrenched during the period from 1840 until about 1920, and that some of these aspects, such as seizing persons to be sold into slavery, were also commonly found in Ibo culture outside of the oracle organizations.

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ECONOMIC AND MATERIAL CULTURE OF THE KALINGAS OF MADUKAYAN

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MADUKAYAN (originally Madukayong or Madukayang), although inhabited by people of Kalinga culture, is listed as a barrio of the municipal district of Natonin, Bontoc (northern Luzon). It is composed of seven different villages or *sitios* along either side of a swift-moving, rocky stream which rises in the mountain just west of Madukayan and flows eastward to the barrio of Saliok, where it turns southward and joins the Siffu River proper a few miles east of Natonin. These *sitios,* from west to east, are Ambigaton, Amoloc, Samoki, Tinaro, Apatan, Malecong, and Tico. With very few exceptions, the people of Madukayan are all related to one another by blood or marriage, and the man most nearly corresponding to a "head" of this extended family is Clement Gomabol living in the *sitio* of Amoloc, most populous of the *sitios* and the place where this report was prepared in May 1955. Madukayan is listed as having a population of 359 in the 1948 census; Amoloc has roughly 25 houses and probably over 100 inhabitants. (Natives give the number of houses as from 23 to 26; this variation is due, no doubt, to the presence of buildings which are not permanently the dwellings of families, e.g., small but well-built houses which are occupied by their builders, who normally live in another *sitio,* only when they come to work their fields nearby, and by others who need extra room due to the arrival of guests in town.)

Madukayan lies along the southern edge of a fairly well-defined area of about 120 square miles of broken, rolling mountains, inhabited by Kalingas of dry rice farming techniques who are distinguished from their neighbors of central Kalinga by the brilliance and elaborateness with which they decorate their clothes and shields. This area is bounded on the west by the highest mountain of the neighborhood, a range extending north and south and rising to its greatest height at its southern extreme, just west of Madukayan. It forms a watershed west of which the streams (mainly the Tanudan River) flow into the Chico River and east of which into the Malag or Siffu Rivers, and thence into the Cagayan River outside the boundaries of the Mountain Province. The boundary on the south is formed by a mountain between Madukayan and Natonin, and on the east by smaller mountains which define the routes of smaller rivers, the most southerly flowing into the Siffu, the northerly flowing northward along the area being described and then turning eastward to drain into the Malag. The northern part of this area flattens

out somewhat and ends with Kalakkad at its northeastern extreme; the mountains north of this area are only just high enough to assure drainage southward instead of northward into the Chico and the Tabuk plain.

The Madukayans — as they called themselves before externally imposed political boundaries made them conscious of larger tribal divisions — have marriage relations with the dry-rice farmers of Bonot and Pangol, but are themselves immigrants from Tanudan. This is evidenced by their own terrace-building and irrigated rice culture — the only such group in a dry rice growing area. At no time within the memory of living men have they been without trade relations with neighbors outside this area. The most enterprising merchants who served them seem to have been the Gaddangs of Kalakkad and Bakari, people who still trade carabaos, vegetables, thread, metal, and beads for money or rice, and who are considered to be definitely foreign, speaking a language imported from Cagayan or Isabella and having outlandish and even uncivilized customs. But the Madukayans also traded with the people from west of the mountains, of both the Tanudan and Chico valleys, calling these people Kalingas (prnounced *kaliŋga*).[1] From the Kalingas to the west the Madukayans got much of their metal and some of their beads. Today the Tanudan people of Dakalan are their chief source of pottery, the Dakalan potters being demonstrably more skillful than any of their neighbors.

Local informants are confused about seasonal variations, explaining that for the past ten or fifteen years the old patterns do not seem to have held true. Generally, the rainy season begins in April and reaches its height in August or September, slackening off in December. January, February, and March are the dry months, usually driest just before the rains begin. The rainy season is characterized by sunny mornings and rainy afternoons, often with clear evenings and usually with clear nights. The climate is mild enough to permit the growing of bamboo, coffee, cacao, papayas, avocados, coconuts, and tobacco, all of which, however, flourish better a few hundred feet lower in Saliok. Amoloc's temperature is considered favorable by a people whose native dress is near nakedness: it is not so cold at Natonin, nor yet so warm that malaria is encountered. (The Madukayans expect to get malaria when they go to trade in places lower than Saliok, such as Bakari or Kalakkad.)

Although Madukayans do not memorize their genealogies, settlers from the Tanudan valley, mainly Dakalan, are named back to the fourth generation. The original settlement was centered at Saliok and Malecong, but in 1903-4 Maduka-

1 The word *kaliŋa* means "enemy" in the Madukayan dialect, and was applied to such non-Kalinga enemies as the Gaddangs. Informants saw no connection between this word *kaliŋa* and the proper noun *kaliŋga*. *Kaliŋa* does not mean "enemy" in Bontoc or Ifugao.

yans who had expanded their rice fields westward up the river settled in Amoloc and, about six months later, in Ambigaton. Americans first came to Madukayan from Natonin in the early part of this century. In 1919 or 1920 the first primary school was opened in Madukayan, midway between Malecong and Amoloc on a site now converted to rice fields; by 1930 all its teachers were lowland Filipinos although it had had an American teacher earlier. During the 1920's the Government farm school at Saliok had progressed sufficiently to distribute young coffee trees about two feet tall to the natives; from this distribution comes the coffee which is common to every house in Madukayan today. (Cacao was also introduced in this manner but did not become so popular.) In the 1920's, too, Roman Catholic missionaries from Natonin began proselytizing Madukayan — with the result that most of its inhabitants today are at least nominally Christian — and in 1927 the Immaculate Heart High School was opened in Natonin. The Madukayan primary school was subsequently moved to Saliok, but after the destruction of its physical plant during World War II, a primary and, in the past few years, elementary school was reopened in Tinaro.

Old Gomabol describes the coming of the first Americans as follows: Before Gomabol was married (his eldest son is now [1955] forty-two), a bald-headed American officer — by which tonsorial characteristic he is memorialized in local nomenclature — crossed the mountains into Madukayan from Natonin accompanied by soldiers. Most of the people fled into the hills, leaving only the oldest men behind to deal with the strangers. The Americans soon reassured these old men, and the rest of the villagers were called back, whereupon they were presented with such gifts as needles, beads, and pieces of cloth. The Americans had come "to teach the people," i.e. to explain the new laws, the most important of which was presumably the one concerning head-taking. A prohibition against carrying either headaxes or spears was still in effect in President Quirino's time and probably still is, although certainly not enforced, either then or now. This prohibition the Americans tried to implement by confiscating all Madukayan headaxes upon their first visit, replacing them with knives or short bolos.

Like all Kalingas, the Madukayans build stone walls for their rice terraces which are technically inferior to those built by the Bontocs and Ifugaos. Less precipitous terrain, a greater water supply, and slighter population pressure probably account for their being able to farm their hillsides less intensively, with the result that they have developed little skill in making perpendicular walls of any great height. Rather their walls are stone-filled mounds with a face at a slope often approaching a 45-degree angle. Like many, if not all, Kalingas, they plant grass or allow it to grow on the top and sides of the walls in the belief that it helps hold the

walls together. The Madukayans are aware of their own lack of skill in building stone walls and are glad to employ Kalingas from the Chico valley (e.g., Bugnay) to build for them.

As far back as living men can remember, the Madukayans have always had two rice crops annually, or even three when reckoning in the dry rice of the kaingins (cleared forest plots), which is harvested at the same time as the second crop of irrigated rice. They also recall no time when they did not have several varieties of all three crops. The kaingin rice produces more grains per scalk but is considered to entail so much more labor than wet rice that all Madukayans prefer to own and work rice terraces. Therefore, although approximately one-third of the year's rice is produced in kaingins, the proportion in each family increases in direct relation to the family's poverty. The Madukayans do not have to import rice or resort to such substitutes as camotes at any time of the year, and so are to be considered wealthy by Mountain Province standards. Modern Madukayans consider they could even increase their produce and export rice if highways were built to make it profitable. It was this wealth in rice, stored up as unthreshed palay in granaries scattered through the fields, which attracted the Japanese to Madukayan during the War, with resultant evacuation by the natives and ultimate burning of the whole barrio.

These rice crops form the basis of the annual calendar, which assigns names to each month in a twelve-month rotation, although there is no conscious awareness of the number of days in a month. The annual recurrence of seasons and the apparent north-south movement of the sun is noted but no connection is made between the solar year and the months. One informant believed a thirteenth month was also named in his youth. This is entirely possible, for one must conclude that the Madukayans either insert an intercalary month in some years or keep such casual record of the sequence that it is possible to repeat a month occasionally; otherwise, within a decade farmers would be three whole months out of phase with the agriculture calendar.

Although Madukayans are not, and have not been, gardeners, they plant camotes and sometimes taro in their kaingins, building fences around them to protect them from wild pigs. (They also transplanted a larger variety of bamboo into Madukayan from lower areas around Saliok, a variety which now flourishes to such an extent they do not have to go on expeditions to bring it back as their fathers did.) Mainly, however, they depend upon wild plants and game for their vegetables and meat. Questioning of older natives indicates that for the past fifty years at least Madukayans have considered three meals a day normal and that they expect to have "viand" (i.e. something other than rice) with every meal.

Meat would undoubtedly be the Madukayan's choice in food other than rice, and is a definite prestige dish. The abundance of wild deer in the surrounding mountains, although decreased since the introduction of firearms in World War II, makes it possible for them to have venison regularly. The meat of carabaos, pigs, and, rarely, cows is generally reserved for celebrations; in former times these animals were butchered only in connection with religious ceremonies. Fish of small size are caught in several kinds of woven basket-traps in the stream; a modern fishing device (observed also in Bontoc and Ifugao) is a rubber-band gun which shoots a thrice-barbed arrowhead off the end of a metal shaft, often an umbrella rib. Fish less than an inch long, along with miscellaneous mussels, crustaceans, and insects in various stages of metamorphosis can be had almost anytime by placing several different kinds of funnel-shaped basket-traps in running streams or even in rice fields. Eels are more difficult to catch; the usual method is to dam up all of the stream except one passage and then stir the eels out from beneath rocks, taking them with a spear with needle-like or pronged metal tip. Also known is some kind of plant whose leaves or berries, when injected into the stream, kill or stupefy fish.

In season, both bats and birds are caught in nets of various sizes and shapes. These nets are stretched on poles on hilltops or breaks in the natural forest cover through which birds or bats can be expected to pass. (Although information was not clear on this point, one must assume the bat-catching nets are attended and manipulated by hunters who can see the form of the flying bats against the night sky, since bats presumably never fly into anything.) Monkeys are found in the forests nearby but not eaten; Natonin people eat their meat and sometimes come across the mountain to catch them. (The monkeys do not enter the villages for fear of the dogs; Madukayans sometimes catch them and "train" them to remove lice from the owners' heads.) A delicacy sometimes found is the eggs of termites or ants which, along with some of the adults, can be roasted or boiled and have a tart flavor similar to lemon.

Only in recent years have eels been eaten, their flesh having been religiously tabued food and being still considered as such by older or more intellectually conservative people. Poisonous snakes have never been eaten for fear of the poison, nor constrictors because their flesh "smells funny, not like an eel's." Dog meat is now eaten with relish, but was formerly forbidden under the same sanction as the flesh of eels: it offended the *anitos* to eat it. People who "broke the *anito* laws" could expect such *anito* retaliation as being killed, carried away in the forest, or cutting themselves while chopping wood. The eating of dog meat was introduced by visiting Kalingas (i.e. from the Chico valley) who at first consumed it themselves secretly; later the habit spread to the less "superstitious." Meat butchered

for a funeral, however, is still regarded ceremoniously, and is not brought into a house by most; it is cooked outside.

Young fern shoots, rattan shoots, and water lily roots are among the main wild vegetables eaten. Both the tiny shellfish and underwater greens which are brought in by children and women are considered standbys when men are "too lazy" to go to the forest to collect wild greens. Like most Kalingas, the Madukayans are fond of a violent red pepper, which is common enough to grow wild along the outskirts of the village and edges of kaingins, its seeds being distributed by birds. Coconut palms are grown, although the meat and milk are used at mealtime only when other things are lacking, at which time the meat can be shredded and eaten raw, or cooked with the milk in a kind of soup. Ordinarily, coconuts are considered between-meal snacks, especially being offered to travellers inasmuch as the milk of a coconut freshly cut from the tree is several degrees cooler than the temperature of the air. Camotes are considered extra-mealtime food.

Nowadays both chickens and ducks are raised, but the latter are modern introductions. Few people in Madukayan are without coffee trees and some have cacao trees, both of which are American introductions of the past thirty years. Both beverages are prepared in the same manner: by drying in the sun, shelling and roasting the berries, grinding (i.e. pounding in a mortar with a pestle) and boiling; they are drunk without sugar if necessary but nobody does so from choice. Sugar cane is, and always has been, raised extensively and is used mainly for making a fermented wine called *basi,* for which reason crystallized or liquid sugar for sweetening purposes is not common. (Gomabol, in describing his youth, referred to the production of *basi* as "our main project.")

The main source of both pigs and carabaos has always been the Gaddang traders. The carabao remains, even in present-day economy, the main standard of exchange in large transactions. The carabaos are turned loose on the mountainside pastures to graze, while the pigs roam loose about the village and make effective disposal of garbage and human wastes. Pigs are fed boiled rice and leaves twice a day, being called in the morning and evening by housewives with a cry reminiscent of hog-calling in the United States. Chickens and ducks are also let loose in the daytime and are fed rice in the evening, after which they are placed in various woven basket-cages which are usually put under the house but sometimes hung up on the side of the house outside. Rather rare is a sort of bird-house on a shoulder-high post, used as a chicken coop at night.

Cooking used to be done in unglazed clay pots made watertight by the application of resin while they were still hot from firing, but nowadays aluminum pots are also used, as well as large shallow vats of iron, often three feet across, for boil-

ing sugar cane juice. When cooking rice in native clay pots, leaves — usually banana leaves — are put in the pot first as a liner to prevent the rice from burning around the edges or sticking to the pot. The pot is placed on three upright stones in a fireplace inside the house; the fireplace is nothing more than a box about three feet square filled with ashes, its smoke rising to the roof gable and escaping through holes made there for this purpose. Fuel, in the form of sticks no more than six inches in cross-section and usually two or three feet in length, is stuck in under the pot from several sides; as each stick is consumed, it is pushed farther under the pot. The fire has been started with the highly resinous parts of pine called "fat" wood or *saleng*. The pot is covered either with an actual clay cover, another smaller pot, or a broken piece of pot. When the rice begins to boil over, the lid is removed, and the froth ladled off the top with a wooden spatula or coconut-shell dipper. When the water has boiled away, the pot is taken off the fire and placed to one side and turned from time to time, or else the flames are extinguished and the pot left on the "stove" above the hot ashes. This "drying" process makes the rice quite fluffy, but it can still be taken out of the pot in solid enough consistency to retain the shape of the pot. Since it is eaten in the hands with no dining implements, this consistency is desirable.

Both meat and vegetables, together or separately, are commonly boiled so as to provide a broth as well as solid "viand." Nowadays iron pans make possible the frying of meat and vegetables, while another method of cooking is to wrap the food in leaves and place it in a pot on top of rice or other food which is cooking, thereby steaming it. A glutinous kind of rice called *diket*, which is available in many varieties, is used for festival dishes; it is pulverized, soaked in water, and then mixed with enough water to enable it to be shaped into small cakes or balls, after which it is boiled with or without leaves wrapped about it, and with or without sugar, coconut milk, shredded coconut, or any combination of the three, added to it. The balls are frequently rolled in sugar or shredded coconut after boiling. (This glutinous rice is much weightier than ordinary rice and "makes the body heavy," for which reason people do not eat as much of it as ordinary rice, and not infrequently suffer from indigestion after eating it.) Salt is considered necessary but is sometimes a luxury, being purchased from lowland sources. Fifty years ago it was obtained, by barter, from salt springs at Bonot, springs still existing but not profitable to work; these springs are warm, not hot.

Although metal or enamelware plates, bowls, and cups of post-war Chinese manufacture are common in Madukayan today, they have not completely displaced the native wooden plates on which rice is generally served. These wooden plates may be as large as fifteen inches in diameter, and are usually intended for

a whole family, or at least for more than one person, being refilled from the pot whenever the rice is consumed. Kalinga houses, like all Mountain Province houses, contain no tables or chairs and so the plates for a meal are set down in the middle of the floor. The diners squat on their haunches or, more rarely, actually sit on the floor. (Mothers, who often stay at the meal longer than others both because they are serving it and feeding several children, often sit down, with their legs bent backwards on one side rather than stretching out in front of them, instead of squatting.) As many coconut-shell bowls as are convenient or available are set down with the vegetables, meat or broth, and in the case of a meal elaborate enough — as is often set before guests — additional coconut-shell bowls are set out for other dishes, salt or, occasionally, melted sugar. There is usually a bowl of water for diners to wash at least their right hands before eating, and after every meal, but never during it, everybody drinks water, usually from a small coconut-shell floating in a larger coconut-shell bowl of water. Any or all of these wooden plates and coconut shells will be replaced for guests with Chinese crockery by those who possess them as highly valued heirlooms.

Like all Montane tribes, the Madukayans expect to feed anybody, neighbor or stranger, who happens to be in their village at meal-time, and have superstitious beliefs in connection with sharing their food. A man who eats in any other man's house is entitled to just as much protection from that man throughout the rest of the day — until he spends a night in some other house, that is — as if he were that man's brother. This is no light responsibility since it means that should a noontime guest depart after lunch and be killed ten miles away, his host would be obligated to pursue his slayer and avenge his death with the same loyalty as if the guest had been a member of his own family. Conversely, it is considered dangerous to share the food of somebody who is your enemy; to do so would cause your belly to swell up. Recent enemies who meet under a truce for the purpose of settling a peace, for instance, have to perform certain antidotal magical acts before eating together. Like all Kalingas, the Madukayans surpass other Mountain tribes in their hospitality, usually starting to cook as soon as an outsider enters the village, regardless of the hour. Visitors can expect, and are expected, to eat each meal several times over in the houses of as many people as care to feed them. To refuse such hospitality is considered if not actually hostile at least unfriendly, and visitors called in for what might easily be their sixth or eighth dinner sit down to even a veritable feast and then take only one or two mouthfuls of rice before calling for water to indicate they have finished eating.

Since pigs and carabaos are butchered only for those social gatherings which in former days were accompanied by sacrificial rituals, their meat is quickly con-

sumed and presents no problem of preservation. In the case of large animals or many animals, however, the meat lasts four or five days, during the last of which both its odor and flavor become markedly stronger, a strength considered tasty by the natives. Food poisoning accompanying this decomposition is at least rare enough not to discourage the practice. Deer meat, on the other hand, is regularly preserved by being exposed to the sunshine or, in cloudy weather, the heat of the cooking fire in the house. One or two days of sunshine is sufficient to preserve it safely, or three or four days over the fire. Flies are uncommon in Madukayan and maggots rarely, or never, appear in the dried venison. The dried venison has a much stronger flavor than the fresh, and is of tough enough consistency to require pulling apart in strands with the teeth rather than biting directly across the grain. The people of Madukayan, however, are used to chewing and digesting tough things and in addition to the bones of small fish and very heavy pieces of cartilage, often masticate and swallow some of the bones of a boiled chicken.

Sugar cane, considered a candy-like treat for children and a welcome refreshment in the midst of a mountain-climbing hike (during which stalks are carried instead of water, which is believed to "make the body heavy" and inspire more thirst), is normally squeezed in a wooden sugar mill which is dismantled when not in use. The mill requires a slight depression in the ground, to receive the jars into which the juice is squeezed, and two firmly anchored posts which are not portable. Across these posts a horizontal frame is placed with holes in it to receive the axles of three upright rollers about a foot in diameter and standing from two to three feet high. The central roller can be rotated by a long horizontal lever attached to its axle where it protrudes through the top of the frame, while the other two rollers are geared to it by rows of teeth both at the top and the bottom. These teeth are about three or four inches long and are driven into the roller by hammering; since the whole strain of the milling operation is borne by these teeth, they are frequently broken and more frequently dislodged, for which reason a four-faced wooden mallet is kept handy to beat them back into place. From four to eight men drive the mill by walking around it in a circle, pushing the horizontal lever before them at chest height. Sugar cane stalks are inserted between two of the rollers by a man crouching below the plane of the rotating lever, and, drawn away from him, are picked up on the other side by another man and crushed a second time by being inserted in the opposite direction between the other rollers. The bottom frame supports a large, flat tray carved of wood, which collects the juice and directs it through an outlet into jars placed beneath.

The sugar cane juice is then boiled in large iron vats of lowland or Chinese manufacture and, if some is wanted for an actual sweetening agent, poured out

into pans to solidify and crystallize. Mainly, however, it is used for making *basi,* for which purpose it may be boiled a second time, undergoes the addition of the leaves or berries or a plant which creates a fermenting yeast, and may even be blended before being placed in jars (with some of the fermenting berries), sealed with leaves and a basketry lid, and stored in a granary. *Basi*-making is common to all Kalingas, most Bontocs, and a few Ifugaos, but their products all vary greatly in quality and flavor, mainly because of the fermenting plants used, which differ from place to place. *Basi* from Madukayan is superior to most other Mountain Province *basi,* and equalled only by that made by nearby Kalingas to the north. Judgment on this superiority is based on the following points: *basi* has a generally raw flavor when new, although in Mountain Province terminology it is then "sweet," i.e. low in alcoholic content and incidentally sweet or at least not sour; as it ages it loses its rawness and usually its sweetness while increasing in alcoholic content; within from six months to a year it often sours into vinegar; in the case of Madukayan *basi,* however, it never sours, and as it ages it becomes subtler and clearer, although it does not indefinitely increase in alcoholic content, so that after five or ten years it is as clear and almost as potent as brandy but much "smoother."

The typical Madukayan house has its framework — supporting posts, floor joists, and roof beams — made of wood and its walls of split-and-plaited bamboo (*sawali*). It is raised off the ground so that its floor is about chest height. Like all Montane houses, and unlike lowland or abra houses, the floor joists are not supported by the upright posts which support the roof; instead, the roof beams, usually of unhewn branches of less than four-inch cross-section, are supported on six to ten posts set into the ground, while the floor joists are supported on eight or more posts set inside the outer walls, so that there is a space even as much as six inches between the floor and the walls of the house, a space admirably suited to spitting betelnut juice through. The roof-supporting posts are frequently fern-tree trunks, the floor-supporting posts less frequently so, being more often roughly squared timbers. The large floor joists support, in turn, smaller transverse "beamlets" placed parallel to one another about three inches apart; on top of these the split-bamboo rolls which constitute the floor itself are laid. This bamboo floor, made very similar to the split-bamboo veranda shades used in the United States, can easily be removed and taken to the stream or spring for washing; moreover, one end of it can be rolled back to permit spitting betelnut juice on the ground below.

The walls of the house, although commonly of *sawali,* are sometimes made in whole or in part of hand-hewn boards, in rather direct proportion to the labor and pride the owner puts into his house at the time of construction. The roof-supporting beams to which the walls are lashed have a decided outward cant reminiscent

of the Ifugao house, but hardly noticeable from the outside because of the lumber, sticks and bamboo which are usually piled along the outside of the house up to the level of the floor. This barricading serves the purposes of keeping pigs from roaming under the house if they are not wanted there or of providing walling for them if they are permitted to sleep under the house, of making a sort of shed to keep tools in and chicken coops at night, and of providing ready fuel for those months when the men do not go to cut wood because of other work or rain. There are generally two openings serving as doorways on opposite sides of the house; these doorways are two to four feet wide and extend from the floor the full height of the walls, usually about four feet or more. (Since there is no ceiling, headroom higher than the actual height of the walls is provided all the way to the gabled roof.) They are closed at night or during storms by *sawali* panels made to slide horizontally on a crude bamboo track on the outside, or are — less frequently — hinged to swing inward and upward.

The floor of the house is not all on one level; one-half or two-thirds is about four inches higher than the rest. A small house has the dividing step running from door to door, with half the floor on one level, half on the other. One-third or even one-half of the raised section will be taken up by the ashbox which is the fireplace, above which are grill-like shelves for drying either fuel or foodstuffs. Larger houses have two levels also but in three sections, with the doors opening into the lower central section and the two raised sections running the length of the house on both sides, one of them having the necessary area devoted to the fireplace. (In all houses in Amoloc, the fireplace is on the righthand side entering one of the doors.) The lower area is something of a literal living room, and there the dishes are set out at meal-time. The raised section or sections are likely to be crowded with stored utensils and what few storage boxes or clothes the household possesses. The usual sleeping position for adults is lying in a row on the lower section with their heads on the higher. Small children sleep any place they want to and into which they can fit at the time they feel like sleeping.

Houses are almost square and vary in size, but the following general remarks can be made: the lower section of the floor is wide enough across its smaller dimension to accommodate an adult's body from foot to shoulder; the raised section is never as wide as the lower, although in the case of the three-fold-divided floor (in which both high sections are of the same width) the total area of the two raised sections will be greater than that of the central low section.

Outside one or both of the doors there is usually a porch or shelf of planks about eighteen inches to two feet wide. Bits of tree trunks or branches are some-

times placed beneath this shelf to step up onto when entering the house, and in some houses these are carved or notched enough to be considered real steps. Less common is an architectural variation typical of houses in Bonot and Pangol to the north: about one-sixth of the floor area just to the left (upon entering) of the main, or front, door is uncovered with flooring, being left open all the way to the ground to provide a space with enough headroom for people to pound rice inside the house; this area has an upright, horizontally hinged *sawali* door entering into it from the outside of the house, and contains a knee-high wooden mortar, which serves as a step up to floor level for people entering through this space.

The roof beams are at a relatively low angle — say, 35-40° — and are not bowed into a curve as are the "typically Kalinga" roof beams along the Chico River. These beams support runo reeds which are covered with cogon grass to a depth of as much as a foot. The ridgepole is about half the length of the house, or slightly more, giving a roof with four plane surfaces, two triangles and two trapezoids, all with the same pitch. The ridgepole has additional thatching tied transversely over it, a thatching which extends beyond its ends somewhat to protect two smoke holes. Beneath this roof there is no ceiling or special storage compartment, although baskets and other utensils or clothing may be hung there. Poles or light beams placed horizontally across the inside of the house at the upper limit of the walls bear some of the weight of the roof, transmitted to them by two uprights between them and the ridgepole; these transverse poles serve commonly for hanging clothing, blankets, or drying bundles of palay.

There is also in Amoloc one house of eight sides, a house reportedly built not long after the original settling of the barrio fifty years ago. The Madukayans consider these octagonal houses — there are one or two others in other *sitios* — to be the old style; they deny that they are or ever were any more indicative of wealth than a square house of similar cost. This octagonal house has its roofbeams tied in such a way as to give them the decided outward bow of the characteristic Chico valley Kalinga house; at about the lower fourth or fifth of these beams' lengths, smaller beams (actually, branches) are inserted at a low angle suitable to making them supports for cogon-covered eaves, giving the whole thatched roof the appearance of a straw hat with the brim turned down.

Amoloc also boasts three "modern" or Ilocano-style houses of handhewn boards mortised together, one of which even has a roof of galvanized iron. They have such atypical features as large windows and doors on four sides, and a separate kitchen — raised up on legs like the house and connected to it by a sort of covered runway — and belong, needless to say, to prominent and wealthy people, one of whom is the Pangat Gomabol.

At least half the men of Madukayan own and wear trousers of commercial manufacture, more often short than long, and all women own and sometimes wear blouses or dresses from the same extra-Madukayan sources. Most men also own a shirt which they wear with their pants or G-string, usually removing it only for hard labor. Women less frequently appear naked to the waist, and associate doing so with a decrease in prestige in the presence of other people not habitually so little clothed. Although all of these imported articles of clothing provide warmth in the cool mornings and evenings, the fact that they are worn in both high and low temperatures indicates that their real purpose is social rather than practical.

Native costume for men, which among adults prevailed with little change until World War II, consists simply of a G-string, most examples of which are nowadays of Ilocano manufacture and offered for sale in every store along the Chico River from Bontoc to Tabuk. These are of one of two bright-colored designs, one predominately red and yellow, the other mainly blue with red and yellow decorations at either end; they are of much coarser cotton thread and looser weave than locally woven goods. A small number of Madukayans continue to wear the locally designed G-string or one with only a slight modification: the substitution of yellow thread for white. Historically, the Madukayans knew only two dyes, made from bark, red and black — and, indeed, the colorfast red dye still used for rattan hat decorations as far away as central Bontoc is considered a secret monopoly of the peoples of eastern Kalinga and Bontoc. Combined with the natural white color of the thread, which is bartered from Gaddang traders, these two dyes produced G-strings and other cloth with a three-color design. This design, in comparison with weaving done in Bontoc and Ifugao, is much finer and has no large areas of solid color, giving it rather a Paisley-like appearance.

The G-string is approximately ten inches wide and ten feet long, or slightly longer, which makes it about the same size as the Ifugao G-string, but two inches narrower and from one to two yards shorter than the Bontoc G-string. Variation in size, particularly length, depends upon the waist of the man or his sartorial tastes, but in general it is of length great enough to be passed twice about the waist and hang a little above the knees both before and behind. It is applied to the body in the following manner:

One end is held against the chest, often under the chin, and the other end is passed backwards between the legs, brought up across the right buttock (rarely the left buttock) toward the front of the body, where it is passed across the stomach toward the left, covering the navel, tightly enough to bind the vertical end, which is then let fall down to dangle loosely. The other end is then continued

back around the waist from left to right for another full turn, passing this time over the piece hanging down in front, and finally being passed in back under the between-legs strand from right to left (thus forming a kind of knot), then being pulled tight and left to dangle behind. While Bontocs and Ifugaos wear the G-string longer in behind than in front, the Madukayans have the longer piece in front. Like all mountaineers, the Madukayans tuck the loose ends into the waistband at almost all times so they will not be in the way of working or walking.

Men make and wear a kind of raincoat of palm leaves sewed to a ropelike strand which is tied around the neck, having the leaves protrude in all directions like a giant ruff or fan. The longest leaves are in the back, which means that any basket or other load carried on the back is also protected. Both the weight of the leaves and the construction allow the leaves to hang downward behind rather than standing out horizontally. This raincoat is completely water-shedding over the area it protects, but of course does not keep the rain off the lower, unclothed, part of the body. A rain- or sun-hat is made of the same leaves, but in this case they are tightly sewed together and have the appearance of a solid fabric; the outer brim of the hat, which is 15-18 inches across, is a strip of thin wood or bamboo. The crown of the hat is peaked upward to a stemlike point, thus giving its upper contour in profile two concave curves, except that it bulges outward above the junction of the two curves to fit the head, which it fits so loosely that a string under the chin is necessary to keep it in place. (This same sort of hat can be found among the Kalingas of the lower Saltan River valley, and is offered for sale as far up the Chico River valley as Tinglayan.) Women also wear such hats when working in the fields, and such a hat decorated in brilliant red, yellow, and black paint (made of bark and berries) is a suitable "courting gift" from a young man to a girl. This brightly painted hat is a singular feature of Madukayan physical culture.

A traditional male decoration not seen since World War II is a brass bracelet made by winding heavy wire, of as much as a quarter-inch diameter, in a tight spiral about the wrist to a length of four or five inches, the upper end flaring outwards to a diameter about two inches greater than that of the arm. These bracelets are applied after being heated to make the wire more pliable, the arm of the wearer and the hands of the operator applying them being protected by pieces of cloth. Once applied, the bracelet cannot be removed without a similarly laborious process of unwinding. For dances, men also donned brass armlets made of two rings and decorated with roostertail feathers, worn about the biceps and constructed in such manner as to be either opened or sprung sufficiently to be put on and taken off simply. Specially prepared roostertail feathers were also stuck into the hair whenever the armlets were worn.

The Madukayans nowadays share the pan-Kalinga habit of carrying their betelnut, tobacco, and accompanying equipment in a red cloth bag, bound with small brass wire, around their necks, hanging in front or in back as convenience suggests. They habitually wear neither hat nor turban. However, fifty years ago the basket-hat of central Bontoc was in style, although without boar-tusks. The top of this hat was usually decorated solidly with small beads, a fact which older Madukayans cite as evidence of the superiority of their hats over the Bontocs'. (Such bead-decorated hats, however, are even today to be seen in central Bontoc, increasing in frequency toward the Kalinga border.) This hat served as the pocket for the betelnut; the red cloth bag was then unknown. Hair was worn in the central Bontoc style, too: left long behind and banged over the forehead by cutting it with a headax against a bit of wood or bamboo.

Madukayans tattoo their bodies extensively, although the custom is dying out among the younger men; a number of young warriors who might have tattooed themselves — or, rather, had themselves tattooed — after taking the heads of Huks who fled through eastern Bontoc in 1951 did not do so, although many young veterans of guerrilla warfare against the Japanese did. While it is perfectly clear that tattooing was a badge of prowess in warfare, the exact regulations governing the application of such decorations are not clear. In the case of the Pangat Gomabol, for instance, his first foray was not commemorated in this manner: "that wasn't big enough," he explains. Later, however, and presumably after more successful warfare, he had his first tattoos applied (to the biceps only) when he was more interested in finding a wife. In the years following, the large and intricate chest decorations were added, bit by bit because of the pain, presumably not in direct response to specific feats in battle but being sanctioned nonetheless by his overall record as a warrior. (Two thin horizontal bands around the biceps, incidentally, are the usual starting point for tattoos; many young Madukayans with only World War II guerrilla experience to their credit have these decorations and no others.) The large back decorations — which are typical of some Kalingas and no Bontocs — were added after his first son was born.

Women are also decorated with tattooing, but only on the arms and upper breast near the neck. Their tattoos the Madukayans insist are only decorations and have no connection with head-taking; if there was a day when such tattoos indicated membership in a family whose male members had the right to tattoo, no memory of it remains. Unlike the Bontocs, Madukayan men and women have their arm tattoos in the same areas of the arm, and also unlike the Bontocs, the Madukayans consider it ludicrous or repulsive to tattoo the face — an attitude not shared by Kalingas of the Chico valley nearer Bontoc. The Madukayans do

excellent work with the tattooing needles, and believe their tracery to be finer and more distinct than that of other tattooing peoples. The Bonots and Pangols either cannot tattoo or are so clumsy at it that they receive their own tattoos at the hands of visiting Kalingas from other areas, and, probably consequently, generally get tattooed in groups rather than as individuals; from this circumstance probably stems the Madukayan concept that tattooing is a Madukayan invention which was learned by other people from them. Many older Madukayans traveled about in their youth as tattoo artists; the Pangat Gomabol was considered one of the most skillful.

Madukayan men used to wear, and still own and value highly, the rather semicircular gold earrings common to most Mountain tribes, and frequently trade them at a value equal to one or two carabaos. These earrings can be worn either in pierced ear lobes or on a string about the neck. Of equally high value are various beads, none of which are to be seen on adult male Madukayans but which are worn both by women and by children of both sexes in great quantity. There are two kinds of beads of especially great value in local economy: agate or agate-like red beads rarely more than an inch in length, and china beads of white glaze with one of two different designs in blue on them, beads less than a half-inch long. Either of these beads can be valued as high as one hundred pesos ($50). In the confusing economic transition in which modern Madukayans find themselves, it is common for parents to bemoan their financial inability to buy copybooks for a child they send to school with a thousand dollars' worth of jewelry about its neck, so little do they consider parting with these visible emblems of their social status.

The traditional weapon and tool of the Madukayans, carried by all males from middle childhood on, is the bolo, which is worn in a wooden scabbard — usually of two pieces of wood fastened together and only rarely open on one side — fastened around the waist with a woven rattan belt. The use of the bolo, however, began in the first few years of the twentieth century when the Americans first came to Madukayan, outlawing and removing the headaxes which up until that time had been the only cutting tool of the Madukayans except such small blades as the rice-harvesting knife. This headax is described by older Madukayans — who, of course, never used it themselves, having grown to warring adulthood since the advent of the bolo — as being of the "typical Kalinga" slender, curved-blade type as opposed to the heavier, straight-blade "Bontoc style." At the present time, however, a number of Bontoc headaxes are actually owned in Madukayan, presumably because of their usefulness as tools. The slender blade with acutely curved edge which made the Kalinga headax so graceful as an Occidental decoration and useful as a head-taking implement rendered it rather inconvenient for

such work as cutting wood and clearing kaingins, for both of which purposes it was used in Madukayan fifty years ago. This fact is readily admitted by older Madukayans, and they remark with some pride their forebears' dexterity in using this weapon as a tool. In cutting hair, for instance, the blade was directed against a block of wood or through a slot in a piece of bamboo, with a necessarily curving motion, while in cutting underbrush or small trees the stroke had to be directed somewhat toward the person actually wielding the ax.

Two kinds of spears are known and named in Madukayan: those with smooth-edged spearheads and those whose spearheads have outward-turned points or even barbs at the rear end, although informants did not feel this difference had any connection to the use to which the spears were put. Spearheads are sometimes fitted into the wooden shaft, and sometimes socket-shaped to receive and enclose the shaft. Spears always have a metal-sheathed point at the other end which renders them most useful as staves for climbing steep mountain paths. Since the Madukayans are not, and have not been, blacksmiths, their spearheads are simply of the designs of their neighbors. A generation ago, when metal was more scarce, sharpened shafts of bamboo were used as hunting spears; both wild pig and deer were taken with such bamboo spears. The metal-headed spear is still used for such hunting, although those who can afford to do so prefer the rifle, generally employing it at night-time with a flashlight lashed to the head to blind and illuminate the target.

Although Madukayans no longer carry shields, as do some of their neighbors to the west, they used them such a short time ago that most men still know how to make them. Enough of them can be found tucked into the roofbeams of houses to the north of Madukayan to indicate that the Madukayans share their style of shield with the northern color-loving Kalingas rather than with those of the Chico valley. The Madukayan shield is the "close-pronged" Bontoc shape rather than the graceful "open-pronged" Tinguian shape which fifty years ago was common to Lubuagan, thirty years ago common to Lubuagan only on festive occasions, and nowadays completely lacking from Lubuagan and all central Kalinga. (By analogy, it is therefore quite possible that the Madukayans once made the "open-pronged" shield, too.) It is characterized by the same brilliant red, yellow, and black paints employed in the "courting gift" hat, both of which objects incorporate in their decorations the oft-repeated hexagon which appears in Madukayan tattooing and which gives objects so decorated a scaley appearance suggestive of alligator hide.

The native costume for women is nothing but a short wrap-around skirt, or *tapis*. Today women will remove their imported blouses or dresses in their homes

or when doing strenuous work such as harvesting. The skirt is woven in a manner and design similar to the G-string, but has two widths of cloth sewed together, so that they form a rectangle long enough to be wrapped around the waist with a ten-inch or one-foot overlap, permitting it to be tucked in at the waist and so secured (although a large, tight belt is applied on top of it), and wide enough to extend from the hip to just above the knee. The navel is exposed, not so much for reason of the narrowness of the cloth, but because by wearing the skirt with a loose fold at the waist, things can be tucked into it in the absence of pockets. Fifty years ago a sort of bustle — loops of rattan hung about the waist to the thickness of a three- or four-inch wide sausage — was worn under the skirt for evidently nothing but the dictates of style. Women also commonly wore a strip of bark, of a special kind which can be made soft and pliable by beating, passed between the legs and held in place by being tucked under the skirt at the waist both in front and behind. This same bark "cloth," incidentally, is used for wrapping newborn infants. Women commonly wear as many strings of beads as necklaces or bracelets as they possess on more formal occasions. These, sometimes woven together, very often amount to solid areas as wide as six or eight inches on the arm or at the neck. Uncommon, but distinctive, is tattooing about the neck which has the appearance of many strings of beads suspended there. Women do not wear the brass bracelets or armlets formerly worn by men.

The strips of cloth, which taken singly serve as G-strings or, sewn together and of shorter length, as skirts, can be sewn together to make blankets or blanket-slings. Blankets bear the same proportion to Madukayan stature as blankets do in most places in the world to the person of those who use them. They are used both for sleeping under and in lieu of a coat at any time the temperature is low and the Madukayan inactive enough to feel uncomfortable. When worn as a garment, the blanket is doubled up or gathered up enough so that when placed over the shoulders like a shawl, the ends taken around the front of the body and thrown backwards over the opposite shoulders, it does not hang below the knees. When sleeping with a blanket, people wrap it around themselves like a cape rather than placing it over themselves after they are lying down, and usually depend for their real warmth during cold nights on pressing close to the body of a sleeping companion of the same sex if they are unmarried or their wives not present, with one blanket wrapped around both. The blanket-slings are simply small-sized blankets designed for carrying babies in. They are used by both men and women and are applied in the following manner:

The adult leans over forward with the child straddling his back just above the waist, covers the child with the blanket-sling, the ends of which are held in the

adult's hands, and then ties the two ends of the sling together in a simple knot across the front of his body, passing it over one arm and under the other. After the child is once secured in this manner, the sling can be shifted around so that the child is suspended on one hip or in front.

Weaving is always done by women, using a cotton thread bartered from Gaddang traders or purchased in Lubuagan or Tabuk, although a small amount of homespun cotton thread is also available. Years ago the unspun cotton was purchased, and nowadays there are a few cotton plants. The spinning is done with a simple spindle suspended from the right hand and kept rotating in half a coconut shell by the motion on the thread, a distaff with the raw cotton wrapped in a roll of paper or bark being held in the left hand. The weaving is done on the simple instrument sometimes called a back-loom and common to all Mountain Province people. Both the warp beam and the breast beam are made of wood, with the latter split longitudinally so as to be clamped over the cloth; the shedding stick and shuttle are also wooden, but the heddles are reeds. The breast beam is held against the body by a belt usually of cowhide or of leather from extra-Madukayan sources. The equipment is of sufficient size to permit the weaving of cloth no more than 16-18 inches wide.

Pottery is no longer made by Madukayan women, the need being small due to cheap commercial metalware and being supplied from Dakalan where pottery is cheap and superior. However, the necessary skill still exists and was used during World War II when pots were once more manufactured. The clay is mixed with a wooden pestle in a sort of crude mortar, and the lump which the potter takes will not have any more added to it after modeling has begun. The clay is placed on a wooden plate of some sort, to enable it to be handled and, to some extent, rotated conveniently. The lump is hollowed by digging out some of the center clay with the hands, no tools of any kind being used at this point. Thinning of the walls, while shaping, is done in the same toolless manner, by removing clay from the inside with the hands. The right hand is kept on the outside of the pot, while the left hand makes upward scooping movements inside until the desired thinness and spread is obtained. Madukayan ex-potters believe their jars are just as thin as those made by other tribes who use the "anvil-and-paddle" technique. In the later part of the process, presumably after the shaping and thinning are completed, a curved piece of bamboo is used to smooth and finish the inside — although it is possible that the spreading of the walls also continues somewhat with the use of this tool. A fruit pit is used both inside and out for the final smoothing. Making the lip is the last modeling process, and is done by holding a piece of cloth in the

left hand over the edge which is to become the lip while rotating the plate with the right hand in a manner very similar to using a potter's wheel.

Firing takes place only after two or three days' drying in the sun. The pots are placed on their sides with the mouths upwards and outwards so the potter can look into them to decide when they are finished, and also to insert a stick to remove them while they are still too hot to handle. It is desirable to take them out of the fire while still hot so that resin can be rubbed on them both inside and out, giving a glaze-like finish which renders them, if not completely watertight, at least less porous. (They become really sealed only after rice has been cooked in them.) These pots are used not only for cooking but for the storage of water, which is also carried from the spring in pots rather than in bamboo tubes.

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